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†The Microscope in the Diagnosis of Malaria.

By R. H. Whitehead, M. D., Chapel Hill, N. C.

My excuse for offering any remarks upon so trite a subject as the diagnosis of Malaria is two fold. In the first place, I believe that the discovery that malaria in all its manifold manifestation is invariably accompanied by the presence of an animal parasite, in the blood marks the most important advance which has been made in clinical diagnosis for many years, and second I am convinced that many of us, perhaps the majority of us are neglecting a very valuable means of diagnosis. While as a rule, the diagnosis is easily made from the symptoms alone; yet there are many cases in which the clinical symptoms leave us in doubt, puzzling cases which all of us who practice East of the Blue Ridge, occasionally meet which would cause us much less worry, if we were only certain that they were nothing but malaria. On the other hand there can be no doubt that many cases of disease are incorrectly considered malarial. Many a case of incipient tuberculosis has been diagnosed and treated as malaria, many a case of syphilitic meningitis has been termed brow ague,and many a case of septic infection has gone to the grave with the diagnosis of malaria.

With our present knowledge, such mistakes need no longer be made. We may with confidence rely upon the fact that if the case be malaria the parasites are in the blood, and a careful search will find them.

Of course there are many of us who have not enjoyed the benefits of the microscope but there are others who are familiar with that instrument, but who yet seem to think that the microscopic examination of the blood is a sort of dilettante procedure on which hospital internes may while away superflious time, but that it is of no practical use to the "busy practitioner," Others fear lest the technique may be too difficult or require too great an outlay of time, on the contrary, nothing could be more intensely practical, and it is to the "busy practitioner" of all men to whom it is most useful. The fear of difficulty of technique should not deter any one who is familiar with the microscope; for the method is simple and the detection of the parasites is in many instances easy. I need not here attempt to give any description of the parasite nor discuss the question as to whether its different forms are connected with different types of the disease, for the detection of any form is sufficient to establish the diagnosis, but it is well to emphasize the fact that the small intra cellular variety (aestivo-autumnal) which is very easily over-looked seems to be the causal agent concerned in the production of the severe and irregular forms of the disease, In the most intense cases of malarial infection we may have to search very patiently and carefully before we can find these small organisms. To all interested in the subject I cannot too earnestly recommend the fifth volume of the John Hopkins Reports containing the study of over six hundred cases of malaria by Thayer, and Hewitson. It is exhaustive of the subject, and the paintings of the parasites by Mr. Max Broedel, the artist to the hospital are alone worth the price of the book, so true to nature are they. Since the methods of examination seem to be not generally known, I shall prescribe the one which I have found most satisfactory In the first place we say that an oil immersion 1 1-12 objective is necessary although the discovery of the parasite by Laveran was made with a $\frac{1}{6}$. Perfect cleanliness of the slides and cover glasses is absolutely essential, to obtain this it is well to boil them in a weak solution of sodium bicarbonate, rinse off in water, and then wash them in alcohol. They may be kept in alcohol, or after drying well with a clean cloth may be preserved dry for future use. The blood may be best obtained from a slight puncture of the lobe of the ear. Pinching up the lobe between the thumb and index of the left hand, after first having washed the lobe well with alcohol the puncture is made with a clean needle. Gentle squeezing will cause a drop of blood to appear, which is wiped away. A second drop being forced to the surface, the centre of the cover glass held in forceps, is gently touched to the top of the drop, A small drop of blood adheres to the cover glass and when the latter is laid gently with drop down on the slide, spreads out between the slide and conver glass into a thin layer one corpuscle thick. It is now ready for examination and the corpuscle will preserve their shape for a half an hour. If one wishes to preserve the preparation longer,a little melted paraffine may be edged about the conver glass. and in this the blood will keep fairly well for several hours.

As I have said the method is simple, but it requires a little practice and careful observance of the steps just described in order to do it nicely. If the glasses be not perfectly clean, the blood will not spread

†Read before the North Carolina Medical Society at Morehead City, June 8, 1897.

under such circumstances, we should not press upon the cover glass and so spread the blood by force, for by so doing the corpuscle would be distorted and misleading appearances be produced. It is best to hold the glass with forceps, for the moisture from the fingers may soil it. Only a small drop of blood must be taken for a large drop will not spread sufficiently thin. In such preparations the larger varieties of the parasite are readily detected, but the small parasites may be easily overlooked, or confused with artificial appearances in the blood corpuscles. It is therefore well in doubtful cases to stain the organisms. This may be done as follows. The blood is obtained in a cover glass in the way just described, and is allowed to spread by being placed upon another cover glass. The two covers are then slid apart, and the thin layer of blood which remains adhering to each is allowed to dry for a moment in the air and then fixed by immersion in equal parts of absolute alcohol and ether for half an hour. The layer of blood is then stained for one minute in a saturated solution of eosin washed, and stained for another minute or two in a saturated solution of methylene blue. It may then be placed upon a slide and studied. The red corpuscle are stained red by the eosin, while the neucli of leucocytes and the parosites are stained blue.

While my own practice is a very limited one, this method has been several times of great assistance to me. For example last fall four cases of fever developed at the University at about the same time in four students from different parts of the State all bearing a close likeness to typhoid in its early stages. After a week or two of prodromes, including nose-bleed, a temperature of 100 F. could be noted gradually rising without remissions to 103 or 104 by the fourth day. But the microscope showed the presence of the small intracellular parasite in each case, and after five grains of quinine had been taken every four hours for five days the fever ceased.

Here in North Carolina we should be especially interested in this subject. We hear much about typho-malarial fever; if there be such a disease, that is, one in which the malarial and typhoid parasites occupy the same host, then the microscope should find the malarial parasite in the blood, In this connection it is interesting to note that out of the large number of cases of typhoid fever treated at the John Hopkins Hospital in only one case were the malarial organisms found.

We should be still more interested for another reason. For many years there was a standing prize offered by a member of the Society for an original article on hemmoragic fever. That prize I believe was never awarded. Right here is a golden opportunity for somebody to make a valuable contribution to Medical Science. The microscope alone can disclose the secrets of the disease. Of course the study of its pathology demands much more than the microscopic examination of the blood and urine. The liver, spleen, kidneys and brain of fatal cases must receive careful study. I should be under obligations to anybody who would send me small portions of these organs. They should be preserved, not in alcohol, but in a solution of potassium Bichromate, ten grains to the ounce of water to which it would be well to add five grains of sodium sulphate. My own observation of hemmoragic fever has been limited to two cases; one occurred several years ago when I was unable to study it. In the other case the small intercellular form of the parasite was present. The urine although of a deep blood color, contained no blood corpuscles; so that this case at least was malarial, and the blood color of the urine was not due to hemmorrhage from the genito urinary passages, but was due to the coloring matter of broken down corpuscles, set free in the blood and eliminated by the kidneys.

DISCUSSION.

Dr. HINES thought that the microscope was a very great help, but that a physician ought to learn practical clinical experience at the bedside of a patient, and ought not to depend on the microscope for a diagnosis.

DR. ANDERSON.—I agree with the gentleman in regard to the clinical diagnosis of these fevers, but I do not agree with him when he says that there is too great a tendency to depend on the microscope in the diagnosis of malarial fever or typhoid fever. I say the tendency is not sufficient. I know that in my own practice and in the practice of some of my fellows, we have had cases where we didn't know whether we had typhoid or malarial fever. I wish the tendency in Wilson was greater to use the microscope. I want to make a statement from a letter which I received from Dr. Pate. Dr. Pate writes: "I have been using Wyatt Johnston's modification of Widel's serum test for typhoid fever for the past seven months. Have examined 22 cases diagnosed clinically to be typhoid fever with the following results, viz.: Agglutination occurred in six of these cases within the first week. Agglutination failed in one case within the first ten days whose subsequent clinical history indicated typhoid fever—was not tested later. Serum test negative in 4 cases. In all of these the malarial parasite was pre-

sent and yielded to quinine in 10 to 14 days. The remaining one case was that of a young man sent from town to his country home by an able physician with a clinical diagnosis of typhoid fever. The serum test was negative. An examination for the plasmodium of malaria was also negative. Made a culture from a moderately inflamed pharynx, from which he had suffered since his illness, and found streptococci. His temperature was normal after 48 hours—antiseptic local treatment—ten days from the time he was taken. His continual rise of temperature and nervous symptoms were all due to the streptococcal sore throat." There would have been a serious case if he had relied on clinical diagnosis alone.

Dr. Hines.—Typhoid malarial fever was a name invented and given by Dr. Woodward. He thought that there was such a fever, but before he died he admitted that he had made a mistake, and said that he was confident that there were only two distinct types—typhoid and malaria. He invented the name, but demonstrated the truth that there was no such fever. In a microscopic test in New York the Doctor proved that a man could have typhoid fever and after the recovery of the symptoms, have malarial fever. The reason that it is thought to be a separate fever is because a man can have the two fevers entirely distinct. The Doctor seems to have misunderstood me. I said that the majority of the physicians must not depend on the microscope. You must, it seems to me, examine a man thoroughly, examine him so thoroughly, at first that you would not have to examine the blood to find out whathe had.

Dr. Whitehead.—I want to say this in defence of my paper. I think we all want to do what is best for our patient, consequently we use every means to make a diagnosis. If we rely on clinical symptoms alone, we are bound to make a mistake. My paper was not written from any knowledge of books, it was written out of my own experience. I know that it is not a hard thing to do, and that it does not requre any great knowledge of the microscope to do it.

How Shall we Treat Pus in the Female Pelvis ?†

By S. M. Davega, M. D., Chester, S. C.

Within the past three years the importance of this subject has been more and more impressed upon my mind, and while it is not my purpose to offer anything new as to the treatment of this disease, I hope to be able to convince you that there is but one mode of successful treatment, namely, by abdominal section, which comprises excision of the pus-laden organs together with free irrigation and drainage. Abdominal section is the recognized treatment of suppurating appendages, for by section, and it alone, can we safely and intelligently relieve bowel, bladder, or omental adhesions. For one to successfully treat these pus cases, and they constitute a large number of patients seeking relief, he must have a thorough knowledge of their pathology, and this he can only obtain at the operating table of the thorough and painstaking abdominal surgeon, whose duty it is in every instance to demonstrate his specimens after their removal, and as far as possible to point out their adhesions to neighboring viscera, by which means the younger minds at least of the profession will receive the proper training and thus be able to reject the dangerous teachings of the vaginal surgeon. I have spent much time watching the work of the best surgeons in this county, and while I have been delighted with the brilliant successes of the abdominal surgeons I have at the same time been disgusted with the utter and often times filthy failures of the vaginal men. Only a few months ago while in a northren city my attention was called to the fact by an eminent surgeon of that city that in one week, and at that very time, five cases had entered his hospital for secondary operations, each one having received a vaginal puncture and rag drain. Most likely these very cases, while undergoing secondary operations, were being reported as cures by the vaginal method simply because becoming disgusted with a daily pus bath, or weary and despondent with the pains due to visceral adhesions and untouched pus sacs, they failed to return to the man who made such fair promises, but sought relief at other hands. For years the well informed and experienced abdominal surgeons have struggled hard to establish their work on that basis of true conservatism which means the preservation not of diseased and necrotic organs, whose functions have long been destroyed, but of human life and health by the early recognition and complete removal of such offending members. The doctrine of curing patients suffering from pus tubes and ovarian abscesses by vaginal puncture and gauze drain is to me equally as fallacious as Bennett's doctrine that by applying strong caustics to the cervix uteri he could cure ulcerations, displacements, and menstrual derangements. The abdominal surgeons of today have to deal with the vaginal surgeons in the same

†Read before the recent meeting of the South Carolina Medical Association.

manner as Sims did with Bennett, and that is to arrest their career by completing their work and teaching the uselessness and dangers of the vaginal route.

Having made a careful study of eighty-six pus sections, noting all visceral adhesions, and the complications arising therefrom, I fail to understand how it is possible to complete such operations in a satisfactory and scientific manner through the vagina. Just here I will use the words of a surgeon, who has done a good deal of vaginal work. He says. "If we have to deal with pus tubes with intestinal adhesions, it is not easy to attack such a case from below. I have tried it and know what it is. The total absence of sight in such cases, the relative inaccessibility and the exceedingly strained palpation endanger the patient more from the consequent bad or imperfect surgery, than does the shock from a careful, but the rough and complete ventral operation." To remove healthy ovaries and tubes from the vagina is easier than through the abdominal opening, I will admit; but I must deny that it is possible to remove pus tubes and ovaries, break up adhesions, take up bleeding points, and repair bowel lesions through the vagina with anything like the degree of certainty and safety that they can be removed through an abdominal incision. For instance, only a few weeks ago, while operating on a pus case, I had to tear away from the bladder a thickened omentum four inches of which had to be removed and below this I encountered extensive and firm adhesions between bowel and specimens. Again, but a short time ago, while operating for pus tubes, due to gonorrhœal infection, after freeing left pus tube, which was strictured near its middle, dividing it into two separate and distinct pus sacs, I found it impossible to seat my ligature, as the abscess extended so far back in the uterine tissue. Consequently I had to dissect out the tube for one inch and then close the bleeding uterine tissue with four deep silk sutures.

Another case of interest in this connection was a patient from whom seven weeks after confinement, I removed a large ovarian abscess and a tube filled with cheesy pus. This patient had a temperature of 104 and pulse 130 when put on operating table. Her abdomen was thoroughly irrigated and glass drainage used with the happy result that 24 hours after operation she had a pulse of 90 and temperature 99½. Now I contend that in the first case, if not wholly impossible, it would at least have been a very difficult and hazardous task to have blindly thrust the hand through a vaginal incision for the purpose of freeing bowel and omental adhesions and finally have to drag these organs through the vagina to do necessary and vital repairs. In the second case I am thoroughly satisfied that the operation could never have been completed through the vagina unless the uterus had been removed along with the appendages and this would certainly have been uncalled for mutilation. In the third case had the ovarian abscess, which was firmly attached to the pelvic floor, been punctured through the vagina, there would have been left behind a pus tube with all its adhesions which would have been a constant source of suffering and danger. This would have been a beautiful case for puncture, provided the operator could have satisfied himself with draining away a quantity of pus leaving behind a pus sac and remaining in utter ignorance of the condition of things beyond. The ultimate result of every operation for suppurating appendages depends not solely on removing the diseased tissues, but upon freeing all visceral adhesions thus restoring the normal relations of the pelvic and abdominal viscera, and this I believe is impossible by the vaginal route. The man, who in a cleanly way opens the abdomen and makes a complete removal of suppurating organs at the same time freeing all adhesions, repairing injured intestines, and removing thickened omentum, is the one whose work will be rewarded by complete recoveries and always command the respect of his patients. Those who practice vaginal surgery argue that their patients have a more rapid convalescence and that you avoid shock and the risk of soiling the peritoneum, and also are spared the annoyance of an external wound. I don't believe there is a living women who would not prefer a clean incision on her belly to a filthy stab in her vagina. While enumerating the many imaginary advantages of vaginal puncture and its much lauded conservatism they fail to mention the danger of puncturing an adherent bowel, they fail to tell you that they puncture one pus and sac and probably leave behind two or more, they also fail to state that they preserve at the expense of the health of their patients diseased and worthless organs. They fail to tell you that they take for granted before puncturing that there are firm and secure adhesions, otherwise pus would be emptied directly into the pelvic cavity. But they do tell you if puncture and drainage fail to cure, you can resort to abdominal section, when nothing is taken for granted and you are able to do clean and precise work. The vaginal method for the removal of diseased uterine appendages is dangerous and I can't conceive of a man

with any experience and training in abdominal work trying to do clean, and complete work through the vagina. Pus cases treated through the vagina do not get well in a few days as some operators would have you believe, but on the contrary it is frequently months before the victim is fit for anything, and even then abdominal section frequently has to be done to cure sinuses and fistulae by removing the cause located in the remnants of suppurating tubes and ovaries. I feel sure that every member of this Association will admit that by abdominal section the parts can be inspected and all necessary repairs made more perfectly and with less risk of injury to the tissues than when pulled out and handled and crowded back through the vagina. One year ago I saw a Philadelphia surgeon attempt to remove the uterus and appendages through the vagina. After sweating awhile over his job he began to wage war with his etherizer and find fault with his assistants. His next step was to pack the vagina with gauze, after which his patient was hurriedly placed in Trendelenberg posture, the the abdomen was opened, diseased organs removed, the gauze was pulled through the pelvis from the vagina, the tube of a fountain bag was seized, and wiggled around in her belly, when the operator remarked that he did not believe in irrigation. Neither did three of us present believe in his method of irrigation as we just one hour before had a beautiful demonstration of irrigation and drainage around on 241 N. 18th Street. On several occasions while enucleating pus sacs, I have broken them and had free pus in the pelvis; but after thorough irrigation and glass drainage my cases all made good recoveries, so after all the soiling of the peritoneum is not so dangerous as the vaginal men would have you believe, provided you are experienced in making a clean toilet. By the early recognition and timely removal by abdominal section of all suppurating form of tubal and ovarian disease, many women will be spared a life of untold suffering, many husbands will be spared a miserable existence, and last but not least, many neglected children will receive the kind care and attention that only a mother can give. As I believe every surgical operation should have for its prime object the permanent restoration to health in the safest manner and with the least sacrifice of organs, I am opposed to hysterectomy for the cure of inflammatory or suppurating disease of the appendages. To remove the uterus, thus changing the relations of bladder and rectum, simply to give the operator more working room is wrong and should never be done. A Chicago surgeon two years ago made this statement: "In every form of septic disease of the female generative organs, which demands the removal of the tubes and ovaries, hysterectomy should be performed unless there are contra indications forbidding it." In reply to this I can only hope that the contra indications may daily and hourly increase, so that in the near future the uterus, which is as much an organ of copulation as well as of reproduction shall instead of adorning the shelf of some so-called up-to-date surgeon, be left in the pelvis, and spare women the nervous disturbances attending its removal.

The majority of the men who are now the warmest advocates of hysterectomy for inflammatory and suppurating diseases of the appendages are to use the closing remarks of a very able discussion by Dr. MacDonald in 1895, "the men who have not been satisfied with the ordinary procedures of surgery; men who have gone up and down the surgical field, painting lilies and building castles of gold, men who have been taking kinks out of the back of Fallopian tubes, men who have been pulling them up into the abdominal incision and squirting bichloride solution at them and restoring them. These men have just swung over or tipped over, you know beyond the median line; the line which distinguishes conservative surgery from ultra-conservative surgical interference. They are going to swing back in time and they will get on to the standard time of surgery."

Some Considerations in the Production of and in the Clinical Employment of Prof, Koch's New Tuberculin.

By Karl von Ruck, B.S., M.D., Asheville, N. C.

The new tuberculin, "T. R.," of Koch is produced by grinding the dried, living, and highly virulent tubercle bacilli in an agate mortar, and after grinding, dissolving out half of their weight with distilled water, and separating this solution with the centrifugal machine. The first solution is designated "T. O." It is clear, opalescent, and 50 per cent. glycerine does not precipitate it.

The germs which remain after separating T. O. are again dried and ground in the agate mortar, more distilled water is added, again the watery solution is separated by the centrifugal process and so on, until the bacilli are practically used up. All the product obtained after the bacilli have lost half of their weight is designated T. R., 50 per cent. glycerine causes a precipitate, 20 per cent. glycerine does not.

Apart from physiologic and therapeutic effects, it is not likely that micro-organisms measuring only 1-10,000 of an inch in diameter can be uniformly ground, so that each individual germ arrives at the same stage of disintegration, when the first or any subsequent grinding is done, and it is therefore probable that the first solution of "T. O." contains like substances as the subsequent solutions designated "T. R." only in less quantity, and that the T. R. contains also some of the substances which predominate in T. O., the latter showing no precipitate with 50 per cent. glycerine, while T. R. also remains clear with 20 per cent. glycerine added.

What probably happens in the earlier grinding of the bacilli is, that the fatty substances are liberated, and that the opalescence is produced by the fats, but some of the proteids of the bacilli must also enter into the first watery extract, but not to the degree as occurs from subsequent grinding, which simply reduces the tubercle bacilli more and more into fragments and which having lost their power of retaining the analine stain because of the abstraction of the fat, cannot longer be demonstrated with the microscope.

In other words the T. O. represents chiefly the fat of the tubercle bacilli with perhaps admixture of minute fragments of germs deprived of their fat, and some of their dissolved proteids, while T. R, contains remnants of fat, from tubercle bacilli which have not been sufficiently ground up in the first treatment, and chiefly solution of proteids of tubercle baccilli, and perhaps also minute fragments having lost their fat. The fact that the T. R. leaves a residue which does not pass through a porcelain filter would indicate that this residue represents probably fragments of the germ.

That the bodies of dead tubercle bacilli with retention of their fat or after extraction of their fat can produce certain degrees of immunity in animals, has been demonstrated by a number of observers, by Koch himself, and also in my laboratory several years ago by Professor Klebs, the only difficulty in the animal experiments appeared to be, the very slow absorption of the whole germs, with liability of large inflammatory indurations and subsequent suppuration at the point of injection.

In the production of T. O. Prof. Koch removes the fat, and in the grinding he divides the dried tubercle bacilli so finely, that their proteids are more readily dissolved, and the immunity is therefore more readily induced without the occurrence of inflammatory reaction and suppuration at the point of injection, and this would be the case whether the T. O. is separated or not.

Such a result could be expected after the past experience with the whole bacilli, but since the Koch preparations are made from the living virulent germs, other questions of a very serious character now arise if this product is to be used in the human subject, namely: 1st. How long does this artificial immunity last? and 2nd, are fragments of living tubercle bacilli still capable of life and multiplication after the artificial immunity has disappeared?

Time only, can settle the first question, so far as we may demonstrate the result in animals; in the human subject it cannot be settled at all, at least not for a long time to come.

The second question we can answer in the light of experience as to the time that tubercle bacilli may be retained in the living organism and still be capable of virulent infection; the fact we can cause virulent infection in animals with tubercle from old, encapsuled lesions of many years duration, the patient having shown no new tubercular manifestations for periods of 10, or 20, or more years, supplies the answer.

Another question and equally important under the circumstances is, are the virulent tubercle bacilli killed by the process of desiccation, grinding, or when deprived of their fat?

Simple grinding would probably not kill them, and if as in all other low plant life, we must presume that the fragments, no matter how small, are still capable of growth and multiplication, our only hope can be in the abstraction of water under the process of desiccation, and in the mechanical removal of their fats, but this is only a hope and not a demonstrated fact, which, however, the animal experiment can soon supply.

If the removal of fat and desiccation should prove able to destroy the germs, a more certain method could be that after drying the living tubercle in the vacuum desiccator, their fat be more effectually removed with chemically inert extractives such as benzol, or chloroform, and thereafter proceed with the grinding after the method of Koch. Only after we have settled these questions satisfactorily and demonstrated the safety of the fluid, can we be justified to use the unfiltered product of Koch in the treatment of human tuberculosis, for we cannot depend upon the centrifugal process to force and cause the adherence to the bottom of every fragment of the tubercle bacilli, nor even of every entire bacillus that may have escaped the grinding process, or become adherent to the vessel above the fluid.

For present use, in human tuberculosis, I should prefer to filter the solution through porcelain, when diluted and ready for use; preferring to use larger doses if necessary, rather than take the risk of possibly infecting the entire organism; which is liable to occur if immunity should fail, or prove only temporary; but I would still more prefer to use the product produced by Koch's method from *dead tubercle bacilli*, from which by a modified procedure of extraction of our own† we have been able to obtain very satisfactory results in the animal experiment during the last year. (Our animals are alive and appear in perfect health after having been infected 7 months ago.)

If as Koch thinks the old tuberculin is valuable chiefly in producing antitoxic immunity, and if the T. R. solution of the bacilli is useful chiefly in producing bacterial immunity, and if as he says, the T. O. solution first separated acts like tuberculin, I see really no use in the separation, both forms of immunity being desirable, especially in the treatment of tubercular disease, and inasmuch as the T. R. is infinitely more toxic than tuberculin, the beginning therapeutic dose being only 1-500 milligram, and the maximal dose only 20 milligram, the associated tuberculin effect can never appear in the form of reaction at all, and can only confer additional benefit.

Professor Koch's point that reactions are necessary with the old tuberculin for antitoxic immunity, and must be avoided with the new product in order to obtain bacterial immunity, is to say the least so fine that I fail to appreciate the difference.

From my large experience with the crude or old tuberculin, I found that every reaction so far as to produce fever or general symptoms is seriously detrimental and this will, I believe, be found to be the case with the new product as well.

In the meanwhile the therapeutic results claimed by Professor Koch from the new tuberculin are the same as first claimed for the old tuberculin, and they are by no means better than those which I and others have been able to obtain from the purified culture products after Professor Klebs' method, especially antiphthisin.

Koch holds out no prospect for cases having temperatures exceeding 100 2-5 F., and in all fever cases, even of less degree than this, it will be exceedingly difficult to control the reactions, inasmuch as it will never be quite clear whether the rise was induced by the treatment with T. R. or by the many incidental influences under which we may obtain more or less increase of temperature in the tubercular subject, apart from the tubercular fever, itself.

The Klebs' preparations have the immense advantage of being non-toxic, never producing any reaction, and they are applicable in all stages and phases of the disease, while the results already obtained by hundreds of independent observers extending over a period of several years are certainly equally good.

Under these circumstances, it would seem that we had better go slow, and await more details from Professor Koch, or eventualiy profit by the experience of those who will now take up the matter for themselves, under special facilities and opportunities for such experimental work.

†Extraction of fats by Benzol and subsequent maceration and solution of the bacilli over warm water bath, and filtering through porcelain.

A Method of Teaching Histology.

By Charles Minor Blackford, Jr., M. D.,
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Not many years ago, the end and aim of education was thought to be the accumulation of bold facts, and he was esteemed the greatest scholar who could, on demand, furnish the longest list of names or numbers with the greatest accuracy. In history, some obscure battle of the Peloponesian War was considered fully as important as Marathon, Wagram as Waterloo, Seven Pines as Gettysburg, and it was thought that the names of the commanders and the numerical losses on each side were as essential as the battles themselves. In every branch of knowledge it was the same, and we can but sigh over the wasted labor and erudition that lie buried in the pages of the "Universal History" and other ponderous tomes of the last century. Inductive logic had not yet been applied to scientific work of any sort, and "learning" consisted of an accumulation of disconnected, unarranged facts or myths,—it mattered little which they were,—useless to the possessor or anyone else. A "history" written during this time is as interesting and instructive as Homer's catalogue of the ships, and equally defies memory and reason, but such works made up the mental pabulum served in schools and universities. The fact that Marathon saved Greek, and hence European, culture and civilization fron Persian barbariam, that Waterloo made modern Europe possible, that Gettysburg sealed the fate of the Confederacy, and that consequently they

possessed importance that others lacked, never appears to have dawned on the minds of these writers, and all events were recorded as of equal importance Fortunately we of today have passed beyond that stage, and study the causes and effects of events fully as carefully as we do the events themselves. and we see that in many cases some striking event is mere the effect of an epoch and but marks certain tendencies of the time instead of being the epoch itself. The American revolution crowned a series of ill judged acts of the British ministry and it would have occurred had the Declaration of Independence not been written. but from most of our school histories we would be led to suppose that that document was the chief factor in producing the war.

In the physical sciences this same misunderstanding of the relation of the subjects of study held sway, and unfortunately still prevails to a great extent. A large number of textbooks are mere collections of statistics, very accurate doubtless but only a dry statement of observations, or if any attempt at popularization has been made, it is at the cost of accuracy. That this need not be so has been demonstrated by Huxley, whose lectures are models of simplicity, conciseness and absolute accuracy.

Ever since the publication of Virchow's "Cellular Pathology," the importance of histology as a branch of medical study has been recognized. On a knowledge of the normal minute anatomy rests our knowledge of pathological processes, and on that depends rational therapeutics, but the ordinary methods of teaching histology are not well adapted to their end. The student is apt to retain only a confused memory of cells layers, fibres and the like, blended with unfamiliar names, and has no idea of using his knowledge in his real life work. Often he cannot recognize the simplest structure when shown under the microscope. The present writer passed through a medical college of excellent standing and received its diploma without having seen a single microscopic preparation,† and he well remembers the mortification experienced when on entering another school as a post-graduate student, he found himself unable to tell liver from kidney by microscopical examination.

The great difficulty in attaining a mastery of anatomy is that there are no "general principles" in it,—that the relations and structure of each organ is peculiar to itself and gives no clue to another. The same difficulty applies to histology, but in this latter case it is not inherent and may be largely overcome by changing the mode of teaching it. The master minds of Darwin and Spencer have shown us that there is order and system in the apparent chaos of organic life, and a few principles, carefully applied, will show that histology is a logical and systematic science.

Chief among these princsples is that of the differentiation of cells. In beginning the course the typical cell should be described at length, and some time given to its practical study. The writer describes the cell as being composed of a cell-wall, protoplasmic contents, and a nucleus, but that it has the power of varying in certain ways from this formation. The wall is described as being a means of protection to the protoplasm in which resides the vital activity of the cell, while the nucleus presides over reproduction. This description is open to criticism in some directions, but it is easily grasped by young men, many of whom are unskilled in scientific language and methods, and can be modified by them as they become more familiar with the subject. Much attention is given to this part of the course, for experience as a member of the Virginia Medical Examining Board showed its importance. One of the questions asked by the Board at one of its meetings was "What is a cell?" The answer obtained from one of the applicants, "A place of confinement," indicated more familiarity with the police courts than with a laboratory, but it shows the importance of thoroughly explaining the simplest matters. The cells are studied practically by observations of the amœba and other protozoa that may be readily obtained, by sections of plants and by animal tissues.

After the student gets a clear idea of the cell, its differentiation should be explained. The simplest way to show this is by taking each of the anatomical parts into which the cell was divided, and show the changes undergone by each, and in this way by showing the relation between each part of the cell and its function, the action of differentiated cells is simple. The student can readily see that if the cell wall is protective, its hypertrophy makes the cell stronger and more resistant, but at the expense of the functions of its protoplasm. The cells of cartilage, developing teeth and bones, of tendon and other members of the connective tissue group are demonstrated, not as representing the tissue in which they lie, but merely as *differentiated cells* in which the wall is changed, and the principle is clearly seen.

In like manner the changes undergone by the protoplasm are studied, and is shown that when the power of contraction is de-

† It is but just to say that the college referred to has corrected this grave defect.

veloped to the more or less complete exclusion of the other properties of the original substance, that the indifferent cell becomes a muscle fibre, when irritability is similarly developed, a nerve cell and so on. Embryonic tissues are used to show the gradual development of these differentiated structures, and they are contrasted with the "connective tissue" differentiation as shown in sections of growing skin, nails, and if possible, repairing bone.

If these principles be thoroughly ground into the student so as to become a part of his intellectual existence, the actual study of the tissue is simple. The layers of the skin, its appendages, hair, nails and even the formation of pigment, the complex structure of bone, nerves, brain, spinal cord and glands are seen to be the result of the various differentiations undergone by the cells, and is seen to be systematic and orderly instead of disconnected and chaotic. Herbert Spencer has empasized the importance of tracing the objects of our study to their sopurces, and has shown that by this means alone can a thorough inssght be obtained. This is more the case with histology than with many other things, and the importance of studying embryonic tissues cannot be overestimated. Not merely does it enable one to understand the more complex adult structures, but without it a great part of pathological histology is unintelligible, for many conditions that are abnormal if not strictly pathological, depends on defective developments, and can only be understood by the light of embryology. The sarcomata are said to be of fœtal type, and they and the degenerative affections are far more readily comprehended when the steps of retrogression are contrasted with those of development. In the ordinary college laboratory it is difficult to study the embryology of man or the higher mammals, but a cheap incubator and a few hen's eggs supply an excellent substitute, and in any large city, embryos can usually be obtained with little difficulty, and their study is essential to a full course.

Comparative histology, especially that of plants, adds much to the interest of the course. Tobacco, coffee and other familiar objects make beautiful preparations and show cell life and its products most satisfactorily. The Algæ furnish good examples of reproduction by fission and the yeast plant demonstrates gemmation readily and fully. A small tub partly filled with water makes a good aquarium for the hydrozoa, tadpoles and the like, and the exquisite demonstration of the circulation, reproduction and development that they furnish, fully repays the small trouble occasioned.

The secret of oratory was said to be action, *action*, ACTION, and that of histology is demonstration, *demonstration*, DEMONSTRATION. So far as is possible, everything should be shown under the microscope and not by a plate. With a large class it is impracticable to have each student harden and cut each specimen for himself, but each one should be taught how to do it. Lectures may be given at the beginning of the session on technical methods, and the class divided into small sections for laboratory work. Then each student should be caused to imbed at least one specimen in parafin and celloidin to be sure that he understands not merely the process but its *rationale*. Each should be taught to cut sections, both free-hand and with the microtome, but after being assured that these details are understood, sections had best be issued, cut out unstained. Staining is an art requiring long experience, and nothing but practice gives expertness in it, so students should stain their own sections, and soon will become fairly skilful in so doing. It is advantageous to vary the staining methods from time to time, even in cases that do not demand any special process, for it adds interest and gives a better mastery of the subject. The same tissue looks quite differently when stained with picro-carmine and with hæmatoxylin-eosin, so by using both the students learn the tissue rather than its stain. When difficuit and delicate methods are required, such as the Golgi or Weigert stains for the nervous system, it may well be demonstrated to each section of the class, but to save time, the stained sections may then be given them to mount. Most of the elaborate methods are of use only to specialists, and the technique of these processes may as well be reserved for special students.

A course such as is outlined above, will prove of interest to every student. He soon begins to take pride in his skill, and when this stage is reached, his study becomes a delight and the knowledge acquired is his for life. The examination should consist of three parts: (1) written answers to questions, (2) recognition of mounted slides, and (3) staining, mounting and recognition of cut specimens presented to him. In this way his real acquaintance with the subject is tested, for in the second part, care is taken to stain the sections in a different way from the one he has in his collection that it may be seen that he knows the tissue and not the stain. If he passes successfully, he is then ready to begin an intelligent study of pathology and pathological histology.

Never shrink from doing anything your business calls you to do.

Obstetric Surgery. †

By Joseph Eve Allen, M. D., Professor of Obstetrics and Pediatrics in the Medical Department of the University of Georgia, Consulting Obstetrician to the City and Lamar Hospitals Augusta, Ga.

The scientific obstetrician of the present day has to be a surgeon for the conditions he ordinarily meets with in practice as well as all the unusual accidents and emergencies that he is called upon to face, have to be treated according to principles that govern surgery. During the past twenty-five years all progress in obstetrics has been along surgical lines, and it is certain that the achievements of the future lie also in this direction. The man, therefore, who would keep up with his profession and treat his patients according to the latest science must bring to bear in midwifery practice everything that characterizes and makes successful the work of the modern practitioner of surgery.

The brilliant results that are now attained in obstetric surgery are due entirely to precision in diagnosis and rigid asepsis in technique. Before exact methods of diagnosis were known, and the necessity for absolute cleanliness in operating recognized the fear of puerperal fever prevented handling of the parturient uterus and effectually barred all advance in operative obstetrics. The average obstetrician was limited in conservative procedures to version and the forceps while infantile life was sacrificed to a frightful extent by frequent resort to the perforator and the knife.

In preaseptic times few lying-in women escaped some form of infection and delivery was often accomplished by methods now known to have been improper. Puerperal fever was regarded as a specific affection and frequently raged with epidemic violence sweeping off thousands of victims or leaving them permanent invalids suffering with chronic septic inflammations. In lying-in hospitals the usual mortality from septicaemia was from two to ten per cent. and even higher, and child-birth in these wards was justly looked upon as almost certain death.

The experience of the City Lying-in Hospital of London, which was made the text of Dr. Godson's address before the British Gynecological Society at its last annual meeting is the common history of all such institutions. This hospital is one hundred and twenty-four years old, and it was quite a common occurrence for it to be closed on account of puerperal fever, while many thousand pounds have been spent in structural alterations, remodelling, demolitions, and rebuildings carried out under the superintendance and advice of the best sanitarians of the day. All effort had, however, failed to bring about more than temporary reduction of the death rate prior to the time when the great discoveries of Semmelweiss and Lister wrought such a revolution in practice. In 1880 the mortality in this institution was 1 to 19. In 1886 the use of antiseptics was begun and that year 480 women were delivered without a single death.

The statistics of other public maternities also demonstrate the inestimable benefits arising from change of methods, Thus Leopold in 1887 records 3089 detiveries, including many operative cases without a death from septic infection. Slawiansky reports 176,646 labors occurring in Russian hospitals with a mortality of three-tenths of one per cent. and a morbidity of eight and five-tenths per cent. The Boston Lying-in Hospital in 1891, records 550 deliveries with no death. The Sloan Maternity of New York had no septic death in 3,000 cases and The New York Maternity 957 deliveries with no death from infection.

Now owing to the adoption of clean methods the danger of sepsis is obviated, the number of conservative operations has greatly increased and embryotomy on the living child is seldom practiced, and perhaps is never justifiable. In well managed lying-in hospitals puerperal fever is a thing of the past and a woman is here much more secure against the perils and dangers of childbirth than she could possible be in the best of private homes.

While in hospitals maternal and infantile mortality has wonderfully diminished, the death rate in private practice is still appallingly high. According to Insurance reports, by Reynolds, in 2183 insured women 197 or 9.03 per cent. died of puerperal causes and seventy-five per cent. of these deaths were from septicaemia. Dr. Cullingworth in a recent address before the Obstetrical Society of London shows that the mortality from puerperal fever throughout England and Wales is just the same as it was before the beginning of the era of asepsis. In America examination of the mortuary reports of any of our cities will disclose many deaths from puerperal septicaemia disguised as malaria, typhoid fever, la grippe, etc.

†Presented at the meeting of the Georgia Medical Association, April 19th, 1807.

Unfortunately, death rates do not by any means show the full extent of the evil done by infection because for every fatal case that occurs about ten patients survive the puerperium to drag out a miserable existence and furnish material to the gynecologist.

It is a lamentable fact that at present at least three-fourths of the deaths in childbirth outside of hospitals are absolutely preventable. This is a terrible indictment of the general practitioner suggesting gross ignorance and negligence and urgently calling for radical reform in obstetric methods usually practiced. The reasons for this state of affairs are many and various. Thus many of the older physicians only half accept, and do follow, the teachings or the new school. In the education of students opportunities for actual bed-side demonstrations are comparatively rare and hence the importance of strict asepsis in midwifery is not so fully impressed and emphasized as it is in surgery. Many excuse their shortcomings by pretending belief in the exploded doctrine of autoinfection, claiming that a parturient woman may infect herself and that hence troublesome precautions are ineffectual and useless. Others quoting the aphorism of the distinguished Dr. Blundel that "meddlesome midwifery is bad," depend upon nature to bring their patients through. While some say that labor is a physiological process and hence requires no special care or attention. Certain physicians claim to be aseptic, but forget that much depends on minute details and quiet their consciences by washing their hands in water containing a few drops of creolin or carbolic acid, leaving everything else to the nurse, and then glibly assert that every precaution has been observed.

The truth is the crude and imperfect methods commonly practiced are ridiculous imitations of real aseptic midwifery and no accoucheur can do safe and thorough work who practices in this way and has not trained himself to manage every labor case according to strict surgical principles.

Diagnosis.—To the obstetric surgeon accurate diagnosis is very essential for upon it is based the whole matter of election in operative procedures. The physical examination which should be made of every pregnant woman long before the beginning of labor furnishes him information that is invaluable. By it, it is possible to decide as to the necessity for interference and to select that method of delivery which best subserves the interest of both mother and child. This examination prevents such mistakes as that of attempting delivery by forceps in cases suited only for version, or craniotomy where symphysiotomy or some other operation would better meet the indications. The obstetrician is thus also saved the embarrassment of having to treat complications for which he is unprepared or abnormal conditions which it is too late to remedy. Without this previous knowledge he is often obliged to do for his patients not that which is best, but that which is most available.

The improved means of diagnosis now at our disposal make it possible to accurately determine the capacity of the pelvic canal and its relation to the foetus which has to pass through it. This gives exactness to treatment and removes the operations of obstetric surgery from the category of emergency operations, in which until recently they were classed, and makes them elective operations, thus very much enhancing the chances of success.

The preliminary examination in order to be of value must be conducted in a systematic manner and should include auscultation palpation, and pelvimetry. Every organ of the body should be investigated and a careful chemical and microscopical study of the urine made.

A record should be kept of every case. This record need not be as complicated as the forms generally used in lying-in hospitals, but must embody such important facts as the menstrual history of the woman, and if she has ever been pregnant before, the course and number of her pregnancies and the character of the labors or abortions, the nature and effects of any disease she may have had before or after puberty should be noted. On this blank also should be written down the results of a thorough physical examination viz. : the condition of the abdomen, vulva, vagina, and perineum, the presentation and position of the fœtus, the rate of the fœtal heart, and the uterine and funic pulsations, etc. Case records when kept in this manner secure accuracy of observation and precision in diagnosis and is wiser to adhere to our present policy, furnish valuable data for guidance in treatment. Physical examinations should be made at the end of the seventh and eighth months. The urine should be analyzed every two weeks during the last three months of pregnancy.

For obstetric purposes the phonendoscope is certainly a great improvement over other means of auscultation as it enables us to hear readily the uterine and funic murmurs, and the fœtal heart sounds in early pregnancy or in cases of occipito posterior positions of the vertex.

Collyer's pelvimeter is the one best adapted for ordinary use as it is perfectly accurate, and convenient to handle.

The important pelvic measurements are the anterior interspinous, the intercostal, and the external and diagonal conjugate diameters. The diameters may be measured without the slightesr exposure, or discomfort to the patient, and furnish most important information, thus in cases where the anteroposterior diameter of the superior strait is between 3 and 4 inches version or the forceps is indicated; in those in which it is between 2 and 3 inches, symphysiotomy or embryotomy is required, while a measurement of an inch and a half imperatively demands the performance of Ceasarian section. The question of the advisability of inducing premature labor in cases of pelvic distortion can alone be settled by pelvimetry.

Technique.—In obstetric surgery the fate of the patient is absolutely dependent upon the technique of the medical attendant. It is very difficult to make the genital tract thoroughly aseptic but this condition may be secured and the same results in private as in hospital practice attained if physicians will only follow some definite method. What is required is a method that is effective and at the same time susceptible of quick and easy execution.

The three essential elements which enter into the aseptic technique of the most trivial as well as the most difficult operations are: 1st. A clean field of operation, the patient must be properly prepared. 2nd. A clean environment, the nurse. the bed, the clothing etc., must be pecfectly aseptic. 3rd. A clean operator, his hands and instruments must be aseptic. It is only by close attention to these things that security from septic infection is made positively certain.

The Obstetrician.—The obstetrician who, with the present lights before him, would introduce a dirty finger into the vagina of a parturient woman, should be prosecuted for assault with intent to murder. Furbringers is among the best of the many methods for making the hands aseptic and is well suited to obstetric practice because it is the simplest. It consists: 1st, In thoroughly cleaning the nails with a metallic nail scraper. 2nd, scrubbing the hands for a least three minutes with tincture of green soap and hot boiled water; using a nail brush for this purpose that has been previously boiled. Special care should be devoted to the nails and finger tips, and the water should be changed two or three times during the process. 3rd. Rinsing the hands in 95 per cent. alcohol, 4th. Soaking in 1 to 1,000 bichloride solution for one minute. No towels are used. The thorough scrubbing of the surface of the skin with soap and water is the most important step in the cleansing process as in this way the bacteria-laden dirt and epidermis is best removed. The chemical antiseptics play but a secondary part and the one used may be a matter of individual choie, or they may be omitted altogether if the scrubbing is done properly. The brushes used require the most scrupulous care or they will become the carriers of contagion, for it is evident that if not repeatedly disinfected they soon become perfect culture fields for every variety of microbe.

The cheap hand brushes made of wood and pigs bristles are easily sterilized by boiling and are kept aseptic by immersion in 1 to 1,000 bichloride solution. Every obstetric surgeon should carry in his satchel an air tight jar containing one or more of these brushes thus prepared. These brushes should be boiled after each operation and the bichloride solution made fresh.

The obstetrican should wear while operating a rubber apron to protect his clothes and over this a freshly laundried and baked sleeveless gown to keep his hands clean.

The Sterilization of Instruments.—Metal instruments, silk, or silk worm gut sutures, glass douche tubes, etc., are best sterilized by boiling in 1 to 5 per cent. carb. soda solution for half an hour. This sterilization should be done at the house of the patient in order to be perfect. Needles are made aseptic by immersing in crude carbolic acid, and should be kept in sterilized oil. Cat gut sutures had better never be employed.

The Preparation of the Patient.—In natural labor the only preparation of the patient necessary is a full bath of soap and warm water and an additional scrubbing of the external genitals, thighs and abdomen with tincture of green soap and boiled hot water, The use of alcohol and bichloride solution may he dispensed with. The use of vaginal douches before or after delivery in such cases is not necessary as bacteriological investigation has shown that microorganisms found in the vagina under normal conditions are innocuous. Antiseptics, particularly bichloride, irritate the mucous membrane, remove the lubricant secretions and interfere greatly with the process of dilatation. In operative cases, especially in consultation practice, where the woman has been handled by a number of persons, every precaution of aseptic technique should be fully carried out. The complete cleansing of the vagina is a very important matter. This canal should be first douched with a sterile normal salt solution, and then scrubbed with tincture of green soap by means of pledgets of iodoform

guaze held in long dressing forceps, the walls being widely separated by Sims' speculum or the fingers after which another douche of normal salt solution of creolin solution should be given. Bichloride should never be used in the birth canal for the reason that as Steffeck has shown it has no effect, even in 1 to 1,000 solution, upon the bacteria present. It forms an insoluable albumenate with the secretions and damages the epithelium so as to greatly decrease its resisting power, and thus increases rather than diminishes the danger of infection. Furthermore intense poisoning has followed its use. When an antiseptic is indicated in the vagina or uterus, creolin is the agent to be preferred because it is inirritating, non toxic, and just as effective as any of the others.

Lubricants.—The vaseline jar of the general practitioner is often to the lying-in woman a veritable pandora's box out of which comes a variety of ills. In normal cases of labor lubricants are never necessary and the sooner they are abandoned the better. Lard should never under any circumstances be employed. If a lubricant is used it should be some perfectly sterile material, such as boiled sweet oil, or a 5 per cent. cresolin solution in boiled water.

The Nurse.—As the success of an operation largely rests upon the preparation and after care of the patient, no obstetrician who has his own reputation and the interest of his patient at heart will consent to treat a case unless he has the selection of the nurse. She should be intelligent, conscientious, and thoroughly reliable and be fully alive to the importance of asepsis in every detail and well trained in carrying it out. Unless she is all of this the most skillful operation and the most elaborate technique will prove an utter failure. Every aseptic precaution observed by the obstetrician applies with even greater force to the nurse for she comes in more frequent contact with the woman, and if she touches her with unclean hands she is just as apt to infect. The nurse should see that the environment of the lying-in woman is clean: that is that the bed, the dressings, the guards, bandages wash cloths, and utensils are aseptic. The clothing of the lying-in woman should be freshly laundried and during operations the field of operation should be surrounded by sterilized towels and fully exposed to view. The bed should be prepared with sheets just from the wash. Dressings are prepared by steaming in an Arnold sterilizer or baking in a common oven. The guards for the vulva are made by cutting a piece of cotton batting 12 inches long, four wide and half an inch thick and folding it in a piece of cheese cloth of a little larger size. These are rendered aseptic by baking for half an hour in an oven or steaming for the same length of time in a sterilizer. The vulva pads should be changed frequently and always burned after removal. Cheese cloth is a valuable material for use in the lying-in room as it is cheap, and easily rendered aseptic by boiling in soda solution. Those physicians who aspire to be specialists in obstetric surgery should keep their dressings and instruments packed in some portable sterilizer always ready for immediate use. Booth's sterilizer is very convenient for this purpose.

Precision in diagnosis and asepsis in technique is the keynote of the great advance that obstetric art has been made during the last quarter of a century and the obstetrician, in order to measure fully up to the responsibilities that now devolve upon him, must ever remember that "the price of safety is eternal vigilance."

The Treatment of Cancer by a New Method, viz: the Electrical Diffusion of Nascent Oxychlorides of Mercury and Zinc.

By G. Betton Massey, M. D., Philadelphia.

The cancerous affections, carcinoma and sarcoma, have been successfully treated by electricity at various times in the past. The extensive bibliography of the subject was admirably shown in an article in an English magazine, the Contemporary Review for March 1892, compiled by Mrs. Edith Faithfull, who gave as a reason for her interest in the subject that she herself was a sufferer from epithelial cancer, and had been under electro-surgical treatment after two failures of the knife to prevent recurrence. Some months had then elapsed since an apparently successful result.

Granting the undoubted occurrence of cures by this agent in the many isolated cases reported, it is of interest to inquire why the method has not been more generally recognized, in view of the reported increase of mortality from this affection under the recognized treatment. This reason was most likely of a three-fold nature, including an inadequacy of the method in advanced cases, uncertainty of dosage from lack of acquaintance of the operators with means for measuring the current, and the general dependence of the profession of late on cutting operations.

The revival of the remedy under modern conditions of electrical knowledge is due to

Steavenson and Inglis-Parsons of London, the latter succeeding in curing a number of mild cases by massive doses of the current, flashed and reversed through the grow from needles of platinum inserted into it and attached to both poles.

It was with these encouraging precedents that I began experimenting with carcinoma of the cervix uteri a number of years ago, and later with sarcoma of other portions of the body, and after several preliminary publications I am now in a position to report results, which, though few in number and not always successful, are yet of truly momentous importance to the human race.

For as a result of these experiments I can confidently announce that a real cure has been found for sarcoma in accessible situations, and a probable cure for carcinoma similarly situated.

The principle of my method is the interstitial diffusion and impregnation of the morbid growth with nascent oxychlorides of lethal metals by electricity in massive doses. The destructive effect of caustics on these growths is well known, but they act only where placed, exactly as the knife does. By my method a relatively infinitesimal portion of the oxychloride acts lethally on the cancer cells because of its nascent condition, and because it is carried by the current into the very cells themselves. But the most important point is that by the method we may cause the medicinal laden current to seek out and follow the paths of proliferation of the growth, failure to destroy which is the cause of its re-appearance after attempts at extirpation with the knife. It is evident that the cancer cell has less physiological resistance to this interstitial attack than normal tissue, for it is found to lose its vitality at some distance from the electrode without causing necrosis of the healthy tissues, through all life in the central portion of the mass will succumb to the method.

The metallic subsatnce is diffused by electrolytic cataphoresis—that is, it is produced by the electrolytic destruction of a metal placed within the substance of the growth, the atoms of the metal uniting with the oxygen and chlorine, and also with the albumen of the tissues, and this compound, together with still nascent atoms of the metal, is conveyed physically into the tissues by what is called cataphoresis, following the lines of least resistance towards the other pole. Considerable diffusion occurs in all directions beneath this active pole since the lines of current flow spread out into a widely separated brush like shape, hence for a proper saturation it is necessary to bring the metal in close contact with all portions of the growth, or else to employ a strong current to convey an efficient density to the desired point.

This diffusion of a metal from a corrodible electrode occurs only at the positive pole; it is therefore necessary to connect the active electrode to this pole of the battery. Up to the present time my work has been conducted with active electrodes of zinc, heavily coated with mercury, though it has recently occurred to me that gold and mercury would be a better combination. In action the zinc [or gold] becomes smaller by erosion, but the greatest loss of substance occurs at the mercurial coating, which must be renewed before each use of the electrode. The exact constitution of the metallic oxychloride thus formed has not yet been determined, but it is most probably in the main an oxy-chloride of mercury.

The cardinal point of the method being a quick and complete saturation of the growth, and its ramifications, it is essentially monopolar, the position of the negative pole being so arranged that the whole of the possibly diseased area shall be traversed by the current on its way from the positive or active pole to the negative. This is accomplished in two ways, as follows:

If the growth be small, the active electrode is placed within it and the negative, in the shape of a large pad, on some indifferent surface of the body. Under this arrangement the current traverses a large portion of the body, and on account of the diffusion that will occur through healthy parts I have never employed more than 400 milliamperes in this way. Cocaine anesthesia, simultaneously produced by cataphoresis, is sufficient up to 150 milliamperes, but the pain developed above this amperage makes general anesthesia often best. At the lower current strength it is essential that the application be daily or thrice weekly, and kept up until the whole of the morbid area has been either destroyed or changed into normal tissue before the cavity thus made is allowed to heal. Besides small and recent growths this method is also applicable to inoperable growths of large size in which the situation of blood vessels or important organs renders the more massive and immediate destruction unwise.

The second method, in which an operable sarcoma or carcinoma is destroyed at once, is applied as follows: The patient being anesthesized a dozen or more lancet-shaped amalgamated zinc electrodes are inserted around the periphery of the growth, just beyond the area of infiltration, each electrode being attached to one of a leash of fine wires that lead to the positive pole of the battery. The negative pole, a disk

covered with absorbent cotton saturated with a solution of potassaic arsenite, iodide, or some other salt with a lethal electronegative radical, is placed in contact with the center of the growth itself. It will be necessary to make openings in the skin or mucous membrane for the zinc lancets, owing to their brittleness and dullness. Every thing being in readiness, a current of at least a thousand milliamperes is now turned on through a controller and reliable meter from a current source of proper voltage. The growth will blanch and shrink at once, while areas of destruction appear about each zinc blade and probably in the center. After a duration of from five to fifteen minutes according to the size of the growth, the current is turned off, the electrodes are removed, and a dry dressing applied.

Such is a brief outline of the methods and their technical details, but it should be understood that these details are subject to change in adapting the method to individual cases. The underlying principles that constitutes the novelty is that there is a virtue in the electric diffusion of nascent chemicals throughout a malignant growth which, when of sufficient density per area, will cause an interstitial death and ultimate absorption of the malignant cells at a distance trom the electrode, without destroying the connective tissue surrounding them, and that this intra-cellular lethal action is independent of and additional to the ordinary destructive action of a strong current in the immediate neighborhood of the electrodes. With this important fact established the cure of cancer in certain locations becomes a mere engineering problem in this age of electric power.

I am happy to be able to state that the truth of these propositions has been corroborated by the independently conducted observations of Dr. J. McFadden Gaston, of Atlanta, Ga., who reported the clinical details of a successful case at the recent meeting of the Americal Surgical Association at Washington.

The discovery of this peculiar action of nascent oxychloride of mercury and zinc was made while the writer was treating a case of inoperable carcinoma of the groin in August, 1893, by means of carbon electrode used as the positive pole. The rapid disintegration of the carbon ball instrument under heavy currents suggested the value of cataphoresis, then already in use in endometritis and other benign conditions, and the mercury was first employed to keep the zinc from adhering to the surface of the wound. But there was an improvement noted in the growth at some distance from the electrode by the next day, and this, coupled with the facts that the use of a hundred milliamperes each time required that the mercury be frequently renewed and that the wound became rapidly aseptic, showed that there was some special advantage in the mercury thus apparently diffused. This case, in which the carcinoma was about three inches in diameter and adherent to the great vessels of the thigh, became much better under prolonged employment of the milder method, nearly the whole of the diseased area filling in with healthy granulations and the gentleman regaining the power to walk, but it was unfortunately impossible to eradicate the cancerous infiltration of the femoral artery and vein, and the termination was ultimately fatal,

Case II. The second case, and the first apparently complete success, was a recurrent sarcoma of the palate which had been partially destroyed by the writer by ordinary electrolysis in 1893. This man, W. H. L., aged 39, had been sent to me by Drs. Hemminger and Bixler, of Carlisle, Pa., with a sarcoma of the left palatial arch fully the size of a goose egg, which he had declined to have removed at the University Hospital. Nearly complete destruction by electrolysis with platinum needles gave him comfort for a year, when it was noticed that lumps were re-developing in the scar. He was at this time [in 1894] placed on the mild zinc-amalgam method, which was kept up daily for six weeks; resulting in a disappearance of the growth after some subsequent additional treatment. Three years have since elapsed and late advices report no sign of a return.

Case III. The third case treated by the method was J. B., a farmer of Salem Co. N. J., aged 55 with an immense epithelial cancer of the face, extending from the external angle of the right eye to the under border of the lower jaw, the functions of the corresponding eye and ear being abolished and the right ramus of the of the lower jaw destroyed. Before admission to the Howard Hospital the patient was kindly examined by Dr. Dunning. An effort was made to change the character of this immense surface by the milder method described, the current not exceeding 100 milliamperes, and the treatment was kept up for the some months. As no permanent change of sufficient magnitude was produced he was finally sent home in a slightly improved condition. I have learned since that he died about a year later.

Case IV, Mrs. —— aged 50 was sent to me by Dr. Saylor-Brown of Williamsport, Pa., October 8th, 1895 in a condition of profound anemia and cachexia from a sigmoi-

dal ulceration of 12 years standing. She suffered from pain in the left groin and had from 20 to 25 black, foul-smelling stools per day.

Local treatment was undertaken with a new, hollow sigmoidal electrode devised for the case with an active surface of mercurialized zinc and so connected with a syringe that its insertion was facilitated by dilating the rectum with a cushion of albolene ahead of the bulb. Obstructions were encountered from six to nine inches from the anus, and this strictured region was extremely sensitive. From 40 to 100 milliam peres were employed with mercurial cataphoresis. After a number of applications a piece about the size of the last joint of the little finger came away and was sent to Dr. Alfred Stengel foi microscopic examination, who pronounced it carcinoma. A large number of such pieces came away subsequently, and after a prolonged treatment she was sent home considerably improved in weight and general health and with the diseased spot apparently healed. The stools had been reduced to two or three a day with normal odor.

Case V. The fifth case, Mrs. H., aged 38, of Muncie, Ind., came under my care March 3d, 1896, with a recurrent sarcoma of the left pectoral muscles, about 3 by 4 inches in superficial extent, and apparently pressing upon the brachial plexus and femoral vein, for the left arm was swollen and the seat of constant pain. Less than two years before in July 1894, the left breast had been removed for a tumor of supposed sarcomatous nature by Dr. Joseph Eastman of Indianapolis. This case was an excellent one for the stronger method described, which had not yet been developed. A small opening was made in the skin, and a zinc-mercury electrode inserted daily with about 100 milliamperes under cocaine cataphoresis. After a number of applicatlons the swelling and pain in the arm ceased, and later a piece of subcutaneously devitalized tissue about 2¼x1 inches was pulled through the opening and the wound was in a fair way to heal. Unfortunately at this time the patient, whose mental condition was that of subacute maniacal exaltation when first seen, developed into acute mania, which compelled her husband to take her home, where the acute mental affection speedily caused her death.

Case VI. Mrs. A. aged 51, of Salem, N. J., came under my care in June 1898, suffering from general prostration. In searching for the cause I found a suspicious ulceration of the os uteri, the cervex being enlarned, hard and very irregular in outline and there being considerable discharge of an appearance characteristic of carcinoma. Suspecting that this existed I suggested the new treatment. Her husband, however, decided, to take her elsewhere for counsel. A week later he brought his wife back to me saying that he had taken her to Professor Parvin who concurred in suspecting carcinoma and advised curetting to be followed later by removal of the uterus if the curetting failed. Being still dissatisfied, the patient was taken to a homœopathic physician of this city who, after a careful examination announced the affection carcinoma, but advised electrical treatment and proposed that she come under his care for that purpose. This latter suggestion caused the patient to be brought back to me, and she was at once placed on mild daily applications of mercurial cataphoresis with currents varying from 50 to 100 milliamperes. This active treatment did not continue quite six weeks, at the end of which time the local conditions had improved very greatly. She was now sent home with instructions to return for an application three times a month, this was changed later to once a month.

The uterus is now normal, the diseased area being completely healed and general health restored. By appointment I took the patient to Dr. Parvin, May 28th, 1897, to verify her present condition.

Case VII, Mrs. B., aged — is now under treatment at the dispensary of the Howard Hospital for carcinoma on the cervix uteri. The cervix had disappeared when the treatment was begun and the patient suffered from frequent hemorrhages, continuous watery discharge and hypogastric pain. Under mild applications the hemorrhage has ceased and all the symptoms have improved, though the extensive infiltration of the pelvis makes ultimate success doubtful.

Case VIII. Mrs. E. J. M., aged — came under my care at the Howard Hospital in the autumn of 1896, and is the only case so far operated on by the stronger method described in this paper. A tumor existed in the scar tissue at the site of the right breast, the breast having been removed by Dr. J. Wm. White, at the University Hospital about three years previously for carcinoma. The tumor was about the size of a half orange. The glands of the axilla were normal.

An attempt was at first made to arrest the growth by the milder method, but this appearing too slow after several months effort, the tumor was operated upon by massive mercuric cataphoresis with 1000 milliamperes at the Howard Hospital, May 3d last in the presence of Drs. A. E. Roussel.

E. P. Bernardy and the resident staff, the patient being under anesthesia. An immediate blanching and shrinkage of the growth was noted, with the production of small areas of necrosis at the site of each electrode and in the center. At the end of 13 minutes the current was turned off, the electrodes withdrawn, a dry dressing applied and the patient put to bed. The necrosed portions separated painlessly in from ten to twelve days, leaving an apparently healthy grannulating surface, but before this time the interesting fact was noted that tissues between the peripherally placed electrodes and all portions of the growth that had not been necrosed had sunk to a level with surrounding parts, lost their angry color, and were now soft and pink. All evidence of malignancy had disappeared except at one spot about the size of a marble which may require an additional application shortly.

A review of these eight experimental cases will show that two were cured, two more apparently cured, two benefitted, and two were failures to permanently arrest the disease. Further reflection on them convinces me that purely local and operable sarcomas and carcinomas should be subjected to the stronger method without delay, and that if this is done promptly a large percentage of permanent cures may be secured; and also that some cures may be hoped for in inoperable cases under the milder method.

Pulmonary Tuberculosis.†

By Dr. Carl V. Reynolds.

One hesitates to enter upon a discussion that has occupied so many pages in our medical literature with the fear that merely mentioning his subject—Pulmonary Tuberculosis—would suggest the wast basket with the thought "Oh it's the same old thing," but when we think that sixteen per cent. of all human lives are fast ebbing away by this monster, we should seek the journals, study them and never loose an opportunity to add our little mite in the hope of lengthening a few days to the lives of the poor unfortunate. It is the purpose of this paper to point out an error which the practitioner, at health resorts especially, so often has to contend. How frequently do you see a lean, emaciated form sitting in your reception-rooms panting for breath, when he askes "Dr. can you do any thing for me?" The answer being "You came too late. I hesitate in taking charge of your case, but if you insist I will take you for a time and watch developments."

Surely there is no one here this evening who, from merely a scientific or remunerative motive would hesitate to advise an earlier change of climate rather than run such a risk; one that would do him little good, and the patient great harm and an injustice. No, when a patient presents himself at your office for examination the first consideration is due the consultant and not the consulted. Circumstances alter cases of course, but judging from the condition of a few that I have by chance gotten, this is being done else-where and it seems to me it should be discussed, and, deemed enough importance to excite the attention of the entire medical fraternity.

All debilated patients especially after typhoid and continued fevers, pneumonia, malaria, pregnancy, etc., are liable to become infected with tuberculosis and when a case presents itself and does not recuperate properly; be suspicious of surroundings and patients, we, as a body of physicians, the guardians of health, should do honor to our title and protect the innocent laymen by advising a change, a journey which will relieve him from all care and anxiety, that mental strain which does so much in lowering vitality; give him the benefit of a change of climate, in other words use prophylaxis and ward off if possible, one of the great bugbears of medicine—Tuberculosis. How careful one should be in his advice to his patient upon leaving, especially so when we know the many complications that arise in this disease. Oh, such a grave responsibility a physician takes upon himself when sending his patient away with the advice, "live out of doors, breathe in the ozone of the mountains, let the Dr's. alone and you will soon recover." To impress this point, allow me to allude to two cases—Mr. A., age 23, on October 20th, called at my office and consulted me for a minor trouble, while present he asked where Highland was, a country village about 40 miles from rail, stating that his medical adviser, an eminent physician of the north, advised him to "go there prepared for rain or shine, remain out of doors all the time, and you will get well without the aid of a physician- But before going I examined him carefully and found that he was then in a critical condition and advised him to return home, but he insisted upon remaining to take treatment, and after my advice was refused I accepted the case upon probation, two months later he gave up, went home and died in a few days. 2nd.—Mr. S. age 35, was sent to Asheville with the advice that "the climate would be

†Read before the "Buncomb County Medical Society, May 16th, 1897.

all that was necessary for his recovery." After arriving here he did gain quite rapidly, so thinking he could easily assend the mountains, an attempt was made. The next evening I was called in haste to find a case of hæmitemesis, the result of not having been properly instructed. Climate is a wonderful aid in the treatment of this disease, but shun the rock that others have stumbled and fallen upon, and send your patients to some resort that suits the case with full instructions to consult immediately the physician of his choice, who will be able to administer more intelligently than the one in the distance. This brings up the subject of climate which would take a volume to discuss, so we will merely mention a few points that should be borne in mind. It is a topic that has received much attention and should receive more at an earlier date, for as we well know, its usefullness comes in to play best, and I might say, almost exclusively in the earlier stages of phthisis pulmonalis, consequently it is used best and wisest by the carefully and early diagnostition, but we must remember that no one climate can be fixed for this disease, as some do best at the sea shore, others in the mountains, some in winter, others in summer, some thrive best in warm moist air, while others in a cool dry atmosphere-Loomis. Each case stands upon its own merits and should be thoroughly analysed before any advice as to climate should be given. To what class of patients can we open wide Asheville's gates? Asheville, whose elevation is 2,350 feet, protected from the raw, moist winds of the North and East by towering mountains, robbing the air of its moisture leaving only dry, pure air ladened with ozone, refreshed by showers of rain only frequent enough and sufficient in quantity to aid and facilitate nature's beautifull arrangement for drainage, obliterating entirely Dr. Burroughs' proposed expectoration ordinance. So dry is the atmosphere, soft, sandy and porous is the soil, so bright is the sun shine, so invigorating the air that every one is out driving, riding or walking, in some way breathing in nature's great restorative. To this climate we can offer a hearty welcome to that class of patients which needs no hastening in tissue change, those in early stages of phthisis pulmonalis, who have vitality and strength, though seemingly weak from an exhausted nervous system, great mental strain, etc., yet every case should be a question of itself, but as a class the above should visit the mountains, and on the contrary, those in the acute stages, with hemoragic tendency, rapid circulation, should not take the cabinate treatment of the mountains but seek a lower and more dense atmosphere.

Treatment of phthisis is a subject that has puzzled the entire medical fraternity for centuries. So eager are we to find the remedy that will relieve those attacked by this trouble that we grasp anything that one of our members puts out; we have tried Koch's treatment, Edison's treatment, Paguim's Serum treatment, all of which have proved unsuccessful in the hands of the general practitioner and today we are at sea in the treatment of tuberculosis. My observation has been that if we follow strict rules as to hygiene, by seeking first the climate best adopted to each case, next and not least important, a residence as near perfect as to sanitary condition as possible, a well ventilated room at night as well as in day, with a large amount of sunlight and with southern exposure, constantly bearing in mind that in doors is not the place for them, out door life being the best and surest way we have in battling with germ life. Drink in nature's antiseptic germaside, tissue builder, red corpusle restorer, live in the air, exercise all the time stopping short of fatigue, and then by the aid of local antiseptics administered by the spray, we can promise a decrease in the mortality rate of this exterminator, if I may so express myself, tuberculosis. No little has been written concerning the antiseptic treatment of phthisis, it has been tried and "found wanting," so say many of our most eminent writers in the past, but today asepsis is again on the boom and in my humble opinion it is the most scientific and common sense way of treating this disease.

If we have infected parts elsewhere on the body we certainly would proceed to treat them aseptically. Why not in the lungs? Oh, say some of us, the tubercle bacilli are so deeply imbeded and indowed with so much vitality that it is useless to attempt to destroy them, before destroying the lung tissue, for the sake of argument admit this to be true, by this method we can destroy the streptococci, which is much to be feared thereby preventing the tearing down of more tissue, infiltrating more lung tissue, arresting the trouble, giving nature a chance to regain her multilated army, the leucocytes, to battle with the foreign, the tubercle bacilli.

One could not finish this partially written paper without mentioning two of the most important features in the treatment of this disease. Diet and Restoratives. The very susceptable gastro-intestinal tract will play an exceedingly important part in the prognosis, so it is here, great skill in prophilaxis should be attempted, nitrognous foods

are a paramount in this trouble and to mention them to my hearers would be useless, but would suggest that the meals be regular, in order that the stomache shall know when to expect, and have ample time to prepare for the duties it has to preform: the principle quantity of food being taken before three o'clock in the afternoon, thus avoid crouding or over-taxing digestion when the evening temperature renders it impared. In these cases we most generally find loss of muscular power, degeneration of the nervous system, absorption of fats, and faulty nutrition, due to mal-assimilation. This at once awakens us to the fact that the restoratives must supply the deficiancy, and here it is that we call upon Pepto-mangan for the muscle. Oleum Morrhuæ to supply fats to the nervous system, the bitter tonics and digestives to prevent mal-assimilation, by this means we simply add to the system that which has been stolen by the tubercle bacilli. And now in closing allow me to insist upon an early diagnosis, having an ever watchful eye, an audible ear, an accurate thermometer ready at all times to leave its case and decide, at the slightest continued ellevation, the destiny of its subject.

Etiology and Treatment of Diphtheria.

By JOHN C. MCCANDLESS, M. D., Chicago.

To say that diphtheria is caused by a specific germ in view of so many failures to demonstrate the presence of said germ in undoubted typical cases of the disease is certainly inexact; and to claim the presence or absence of the Klebs-Loeffler bacillus essential to confirm the diagnosis, is in the writer's opinion imaginary precision.

Defective plumbing or filth can be associated with the history of the disease in more cases than the bacillus, and if we consider a lowered vitality with a septic condition of mouth, throat and stomach—a favorable soil for germ—we have sufficient data to establish a somewhat different theory.

Considering the prevalence of this disease, we are justified in giving it special attention. If the physician resort to the use of any unscientific nostrum, as hundreds have done, he invites competition from the parasitical charlatan, and thereby reduces the noble profession and his practice to more uncertainty. Let us consider the evidence more carefully.

In addition to the foregoing conditions and surroundings, we have a fibrinous exudate which, in my opinion, serves a similar purpose to the fibrinous wall surrounding an abscess cavity, or the demarkation line preventing the absorption of septic matter into the circulation; and according to reliable authority (D. J. Hamilton, Pathology Vol. II, Part 1, P 15) the false membrane is unreliable as a means of diagnosis. Certainly this "false membrane" cannot be included in the etiology, but why is the development of this membrane dreaded? And does it ever bring about the lethal termination? It is only dreaded by those who fail to remove the exciting cause of its development and death follows—if due to the exudate—from mechanical effect.

According to Ziegler the Klebs-Loeffler bacillus and many other germs are found on the surface, and the fact that the germ is not found in either blood or tissues is evidence that the specific germ in company with other germs finds suitable soil for development on a septic mucous membrane, and does not seek pabulum in the healthy tissues.

Hamilton says: (Pathology, Vol. II, Part 1, P. 18) "The deposits lie quite superficially, and are separated from the epithelium of the mucosa by a layer of fibrin and leucocytes." Out of 80 children examined by Roux and Yersin the Klebs-Loeffler bacillus was found in 61 of the cases. Is it true then that the specific bacilli alone are characteristic of diphtheria? If no other bacilli were present in addition to the Klebs-Loeffler, I would say theoretically yes. While the preceding history of disordered nutrition, and consequently lowered vitality and perverted function, is it correct to say that the Klebs-Loeffler bacillus causes diptheria? I answer no. But granting that the Klebs-Loeffler bacillus is characteristic of diphtheria, are we justified in administering toxic agents for internal use when the deposits lie quite superficially? If the germs were found in the blood and tissues would rational therapeutics include antitoxic agents for internal use?

What effect does antitoxin have on bioplasm or on viltality? If it destroys germs it must necessarily destroy bioplasm and lower vitality, and when we consider that recovery must depend on vitality, there should be more consideration given to the recuperative powers.

According to Osler, "The contagion is not widely diffused in the neighborhood of the patient." Proper nursing then will prevent a spread of the contagion. By proper nursing I mean—among other things—strict cleanliness. I have been very much impressed with the fact that when proper nursing and precautions are observed, a second child in the same home is seldom attacked, even though all at first are similarly exposed; but several children in the same

building suffer, though intercourse is entirely shut off from first patient.

I have no disposition to underestimate the evils of defective plumbing; neither have I any desire to underestimate the importance of predisposition of patient. Defective plumbing is found in buildings where cheap material is used. Where the main object of the builder is to make money, and where the health of the tenants is of secondary importance. There should be better sanitary supervision of such buildings, and especially at this time in view of the number of flat buildings being erected. If constant work cannot be secured for the poor, more healthful surroundings should be provided.

Considering closely the history of diphtheria we will find it closely allied to filth, but not entirely the result of filth. Predisposition in the writer's opinion consists of a vitiated condition of the system, due to lowered vitality, retained excretions and septic condition of the alimentary canal. When the physiological function is imperfectly performed in the alimentary canal, as a result of lowered vitality, extraneous forces may then invade the domain of the vital force, as no doubt the characteristic offensive odor is a manifestation. Lowered vitality, however, may not always be in evidence. Sudden abuse of the stomach from overloading with improper foodstuffs may be the prime cause in a great many cases. Derangement of the alimentary canal from constipation, retained excretions and impaired nutrition, no doubt predisposes to the development of the much dreaded disease.

In cases where there is a strong vital effort the disease evidently is confined to the mucous membrane, or more properly speaking, the development of the disease is due to impaired function of the mucous membrane, coincident with the influence of external surroundings—sewer gas and other poisonous and devitalizing substances.

Is diphtheria confined to the throat, and granting that membranous laryngitis is diphtheria also, are the stomach and bowels ever in a normal condition when the local manifestation is present? If so why does emesis have such a beneficial effect as treatment for croup? It is undoubtedly a difficult matter to induce physicians to apply simple remedies for diphtheria—not because they are unwilling to try everything that comes along be it a compound of old horses, snakes or Germany—but because of a general misunderstanding of the conditions.

The characteristic offensive odor is evidence of a septic condition, then antiseptic treatment is in order, but the rapid progress of the disease indicates the necessity for prompt and effective measures. How then shall we apply antiseptics, and what agents shall we use? What is an antiseptic? A quite generally accepted belief is that bicloride of mercury and carbolic acid are antiseptics, but Hare's definition in his latest text book on therapeutics would hardly include such agents. He says, "antiseptics are substances which simply render the material with which they come in contact so antagonistic or unsuited to germ development, as to render their presence for any length of time impossible, at least in an active state." This of course has reference to the tissues of the body or the alimentary canal. Do poisonous substances exert an antiseptic influence in the tissues or even in the alimentary canal? If the walls of the alimentary canal were impervious to poisons, it might be possible, but poisons coming in contact with bioplasm will destroy the vital principle, and the "morbid accumulation following a continued use of such agents is evidence of destruction of the cell or at least the cell function. It is considered by good authority that a lowered vitality in the tissues is more favorable to germ development and the control of other forces. Poisons are germicides then and not antiseptics. There is no evidence that the Klebs-Loeffler bacillus develops on healthy tissue under full control of a normal function.

The proper treatment for diphtheria then is to apply such agents as will "render the material with which they come in contact unsuited to germ development." An aseptic condition of the alimentary canal will be the result of such practice. How is this to be done and what agents will we use. In this condition lavage is not practicable. In every case of diphtheria an emetic with a proper selection of remedies is the first indication in treatment. A strong stimulating astringent administered in a quantity of warm water, followed by nauseants will cleanse the stomach and throat, and secure an aseptic condition quicker than any other method known to the writer. This can be followed by antiseptic medicine every hour or two.

Ipecacuanha is recomended by Osler as the best agent to produce emesis in membranous laryngitis, but one case which I was recently called to attend failed to respond to a large dose administered by the mother before I arrived. I believe we have more valuable and effective agents than Ipecac for emetic purposes. The poison on the diphtheritic surface should be removed as quickly as possible, avoiding the use of any agent which would favor absorption of the poison, and it certainly cannot be adviseable to add any more poison, unless we know

with a degree of certainty that it will be either neutralized or prevented from coming in contact with the healthy tissues, as it destroys the recuperative element in the cell by "quickly extinguishing vitality."

Pathologists point out an important fact concerning the deposits being on the surface and not in the blood or healthy tissues. Why then establish "antitoxin" arsenals all over our beloved land and thereby foster the martial spirit in the physician to pour the deadly shot into the healthy tissues of innocents. Certainly "antitoxin" is not logically defended as a remedy for diphtheria. Enough attention has not been given to the pathology of diptheria and croup, otherwise faulty therapeutics has restricted a coordinate advance in the application of remedies. Great claims have been made for antitoxin especially by government-fed subjects. Peans have been manufactured for Beecham's pills and would be poets have thrown out the nauseating twaddle in an effort to eulcgize Jenner and his homeopathic dose of filthy pox pus, but all such claims are as unworthy of a moment's consideration as the tale of St. Patrick's holy "fut" driving the snakes from Ireland.

For emetic purposes I have used the following:

F.Ex. Myrica Compound.
Sanguinaria aa drachms ss.
Aqua fervens Oss.

Mix, directing the patient to drink at once and repeating the dose as often as desired, considering the stomach's capacity. The Myrica compound I use is prepared by the Searle and Hereth Co., 75 Wells St. The formula is as follows:

F.Ex. Myrica cerifera (bayberry) 32 parts.
" Hemlock bark.
" Ginger aa 16 parts.
" Capsici 1 part.

This will seem at first thought harsh treatment but considering the condition of the mucous membrane, it is not. As soon, however, as an impression is made and the stimulating effect of the capsicum is perceptible in the mouth, the patient may require a little urging to continue the treatment, and if a child it may be necessary to use force. After a sufficient quantity of the stimulating astringent solution be given half a drachm of F.Ex. lobelia may be administered in warm water with ten grains of sodium bicarbonate. This will generally secure emesis. For the ordinary case of diphtheria it may be necessary to repeat the emetic on the second or third day. After the emetic one grain of podophyllin may be given if an adult. If a child a smaller quantity. Such antiseptic agents as Myrrh, Babtisia, Eucalyptus and Capsicum may be given every hour, or Listerine, Borolyptol, etc., may be used. The same treatment will apply to croup. If membranous laryngitis the emetic should be repeated oftener, adding more Lobelia than for the ordinary case of croup or diphtheria.

If the foregoing treatment be faithfully carried out, tracheotomy will not be rqeuired in didhtheria. This, no doubt, will seem a startling statement, but I speak from experience and stand ready to demonstrate the truthfulness of my statement to anyone not familiar with the line of treatment just given.

The major part of kidney complications and paralysis following diphtheria, is due in my opinion to the aborption and retention of the poison and faulty methods of treatment. If improperly treated or left untreated the disease is one of the most fatal of filth diseases, but properly understood and treated, it is easily reached and combatted; and unless serious complications exist with and previous to the disease 99 to 100 per cent. of the cases will recover with the afore mentioned treatment.

About a year ago I was called to attend a patient ac. 40 suffering from diphtheria, and who previous to this time was being treated by a prominent physician without any benefit. Nitrate of silver was used locally, but I am not sure as to what the internal treatment consisted of. Being unable to secure the physician's services longer, I was appealed to on the grounds of charity. The patient was unable to swallow water as it would run from his nostrils as fast as he attempted to drink. The Eustachian tubes were so involved as to destroy hearing temporarily. He was unable to speak in an audible voice and was suffering intensely from dyspnœa. The patient had been under treatment for about five days without any movement from bowels, had eaten nothing during this time and was emaciated. Tracheotomy offered the only hope of saving his life, but before going further, I gave him F.Ex Lobelia Compound, one drachm to cupful of warm water. After repeated attempts he succeeded in swallowing some of the solution, and was soon able to drink freely. The F.Ex. Lobelia Compound I use is from a special formula prepared by the Searle & Hereth Co., also. The formula is as follows:

Lobelia sem.	parts	4
Cypripedium Pub.	"	3
Gum Myrrh	"	2
Capsici.	"	1

Such powerful relaxants as Lobelia and

Cypripedium administered with warm water by relaxing the parts is efficient in opening the passage whilst the antiseptic properties of Myrrh and Capsicum combat the temporary absorption of septic matter until emesis is secured. I then gave him the regular emetic as previously outlined in this paper, and repeated it on third day. I also gave him one grain of podophyllon, to be repeated in eight hours if bowels failed to move, with the following:

℞ F.Ex Hydrastis Com.....drachms 4
Tinc. Myrrh Comp.. .....ounces 2
Syr. Simp. qs. ad.....ounces 4

Mix. Direct. Teaspoonful every hour. After the first emetic the dyspnœa no longer troubled him and he was able to hear faily well. He recovered in less than five days with the exception of a slight laryngeal cough.

I have applied this treatment in the case of a child one year old, and intend using the same regardless of age. After the emetic is properly administered the depression—present in almost every case of diphtheria—almost entirely disappears, and convalesence is brought about in the worst cases on the fourth or fifth day.

When the ulceration is severe convalescence is not quite so rapid. The stimulating and astringent properties of the agents used for the emetic however have the desired effect when brought in contact with the whole septic surface as called for in the method referred to.

In conclusion I claim superiority for this treatment over all others for the following reasons: (1) No mortality follows the treatment. (2) Owing to the peculiar properties of the agents used the desired impression is made on the mucous membrane, and all septic matter is thrown off. (3) With the septic matter removed antiseptics have the desired effect, and render the mucous membrane unsuited to germ development. (4) The treatment is scientific and practical in every instance.

I anticipate considerable scepticism in regard to this paper, but I offer it with the most profound confidence, and earnestly hope for the time when human suffering shall be relieved through subjection to safe and scsentific treatment by scientific physicians. When we consider the importance of human life nothing short of a conscientious performance of duty will fulfill our obligations, and with this purpose in view I respectfully submit my conclusions for consideration.

4166 South Halsted Street.

Every lie is the assassin of somebody's happiness.

Chronic Constipation.

By Everett D. Peek, M. D., Oglesby, Texas.

It may be said that there is almost no individual who has passed his fortieth year but has suffered more or less from this disease. At the same time almost all of this trouble is the patients own fault and could have been prevented just about as easy as not.

The causes of constipation in its chronic form are so varied that it would be almost impossible to name them all so we will give only a few of the most common, as we have found them in practice. Irregularity in our habits have in my experience been a frequent cause of this trouble. Coming under this head we may mention the habit of eating too quickly not taking time to masticate and insalivate the food as it should be; then neglecting the desire to evacuate the bowels or taking too little time. Another very important cause is the habit of taking purgative medicine. You may take the strongest man in America and give him a dose of patent medicine every time he has headache or feels stupid and it will be only a matter of time when this habit will so fasten itself on him till do what he will he must have his liver medicine and yet he feels that each new dose adds fuel to the flame. Just think of the number of patent liver and bowel medicines on the market, and yet there are men and women in the practice of every physician who have tried every one of these as they have been placed on the market. Indeed it is remarkable what abuse this old body can bear. The most serious thing a man can do is to take a purgative without the advice of a physician. Then we have as causes eating too little or too coarse food. Atony of the muscular layers of the bowels, and many others with which every physician is well acquainted. The two which I wish to put special stress on are irregular habits and the use of purgative medicines.

The symptoms of constipation are many, yet the patient may have the most persistent constipation and at the same time suffer very little inconvenience, but as a rule there is headache, drowsiness, coated tongue, melancholia, loss of appetite, flashes of heat, and in women, where we find a large per cent. of this trouble, we may have diarrhœa and vomiting, and a variety of uterine troubles aggravated. We may find the fæces so impacted and hardened as to closely simulate abdominal tumors, but, as a rule, these are found in the colon or cæcum, hence position and shape will help us make a diagnosis. I once treated a case of this

kind caused by watermelon seed being impacted in the rectum to such an extent that nothing short of mechanical means would give relief.

I have had many patients tell me their bowels did not move more than once a week and some even longer than this. Just think of the waste of our bodies being retained and absorbed, and carried to the delicate tissues of our bodies there to poison and devitalize the very life fountain of our being is it any wonder the subjects of this trouble suffer innumerable pains and aches, and are both mentally and physically inactive.

Of course in uncomplicated cases there is no trouble to make a diagnosis in a large majority of cases the patient will do this for us, but then we have cases where it is with difficulty we are able to make a diagnosis. If there be a tumor we can, as a rule, tell by its doughy feel, being in the colon or cæcum as a rule, and being in the form of these organs when distended. Fæcal impaction may become channeled, giving only a small passage, and yet we may have severe diarrhœa. Here digital exploration will reveal the trouble, and more than all, if these tumors are removed after the use of a purgative or enema we are sure of a diagnosis. The treatment is both preventative and curative. As a rule, nearly all the cases of chronic constipation could have been prevented by the very least amount of care on the part of the patient.

The very greatest caution should be observed as to our diet. Do not eat a food that is too concentrated, or one that is too coarse. Eat plenty of fruits of almost any and every kind. Then it is necessary that we go to our meals at regular intervals, taking plenty of time to thoroughly masticate our food. Then it is necessary to go to stool at least once each day and remain sufficiently long for the bowels to be thoroughly evacuated. Because you do not feel a desire do not refuse but go any way, and give plenty of time. Then it is best to go at the some time each day so this finally becomes a habit, and it is not the very least trouble, but if we give way to the desire to evacuate the bowel every time we feel so inclined, we will have soon evinced all regularity as to these desires and thus take the first step toward forming the habit of constipation. It is not a hard task to so train yourself that you will have a desire to relieve the calls of nature at the very same time each day; then follow this desire and do not give way to it at any other time.

Then if we would prevent thousands of cases of chronic constipation let us take from the market the many patent liver medicines. You hear people extol these medicines, telling you they verily believe that had it not been for a certain pill they would have been dead before you arrived, when in reality if he had only given himself a little rest and let the pills alone he would have had no use for you. No man can afford to take a purgative of any kind except by advice of the doctor.

As to the measures used to cure constipation they are many, but those which are really of value are few. A good drink of water on rising in the morning is sometimes very useful. For some people one good ripe apple is sufficient to relieve the bowels once a day. As a matter of fact there is no treatment that will relieve this disease unless you give plenty of water and fruits of different kinds. It may be stopped for a time but almost sure to return.

Oatmeal is a fine remedy to some patients likewise smoking will relieve many. Regular and systematic friction of the bowels is valuable. As also a squatting posture in performing the act of defecation is of the utmost importance.

Various medicines are used as infectious, but as to my part I would rather try other means first, and should others fail glycerine, soap, soda and various kinds of suppositories might be used.

The medicines that have given me best results are strychnine in as large doses as it can well be borne. This drug will relieve many cases when all other means have failed, but as stated it is necessary to give it in very large doses, and so continue for a few weeks then gradually reduce the dose. It is an ideal remedy for it not only relieves the costive bowel, but it is a fine nerve tonic as well as stomachic.

Also we have in cascara sagrada a fine remedy for this disease. In the treatment of over fifty cases I have not failed in a single case with the two medicines just named. In prescribing cascara I find there is a great difference in the effect of the different makes on the market, so much so that if you are not careful to get a good quality of the drug you will be greatly disappointed with it.

The following prescription with regulation of habits of the patient has rarely failed to give relief in my hands:

℞ F. E. Cascara Sagrada,..... P. D. & Co.
Tr. Nux Vom.....aa ii ℥

Sig.--Fifteen to twenty-five drops as necessary in water before each meal.

I find the above preparation perfectly satisfactory in almost every case. Consequently I use no other.

Often when the fæces have become impacted it is necessary to resort to mechanical

means for their removal to be followed by the above treatment for the habit.

Belladonna is sometimes very useful combined with the above medicines. Whenever it is necessary to use a purgative, as it is in the beginning of treatment, I know of nothing to equal epsom salts, but I wish to repeat that we should never use a purgative unless there is no other means of obtaining the desired end, and then use them with the very greatest of care. If both the patient and the physician will be patient and careful in the use of the above remedies there are few cases of chronic constipation that they will not cure.

Congenital Cystic Hygroma.†

By J. A. Goggans, M. D., Alexander City, Ala. Grand Senior Counsellor of the Medical Association of the State of Alabama; Fellow of the Southern Surgical and Gynæcological Society; Fellow of the British Gynæcological Society.

I would call the attention of the Society to a peculiarly interesting class of tumors. They are most generally developed about the region of the neck, and I say that they are peculiarly interesting, because they are very indefinite and cannot be removed, though they may seriously endanger life, they oftener disappear spontaneously.

Another reason for calling attention to this class of tumors is that they receive such slight recognition from writers on general surgery. In fact, I know of no work on general surgery that give the differential diagnosis of these tumors in such a way that the student or general practitioner would be able to identify them when meeting them for the first time in practice. I refer to the *Congenital Hygromata*.

Congenital Cystic Hygromata are most often mistaken for Lipomata, and when developed about the floor of the mouth they are mistaken for ranula.

Lipomata are rarely found at birth, while hygromata are rarely found upon an extremity. Both of them are painless and may present an indefinite border and a dimpling of the skin when they are raised between the fingers and thumb, with a slight sense of fluctuation. In lipomata the skin can always be separated and raised above the underlying tumor; not so with congenital cystic hygroma, and this is the distinguishing feature of the two pathological conditions, and is explained by the fact that hygromata are composed of dilated lymph spaces varying in size from cysts just large enough to be seen by the naked eye, to cyst as large as an orange, and these dilated lymph spaces extend into the deep layer of the skin itself.

I have stated that hygromata are rarely met with upon an extremity, still they are sometimes developed upon the extremities. I had an opportunity of examining several cases of hygroma of large size in the Arneant Street Hospital for children in London, by the courtesy of Mr. Edmund Owens.

I mention one case of an infant 4 months old, which was most interesting. The tumor was very large and occupied almost the entire right side of chest from the axilla to the 12th rib, and from the sternum in front to the spinal processes behind. This case presented many of the characteristics of a fatty tumor, but the skin was intimately adherent to the tumor on quite a large part of its surface, and the balance of the tumor seemed to be almost semi-fluid. The treatment advised was expectancy.

Another case to which I will allude briefly. I witnessed the operation at the hands of Prof. Bergman, where he employed carbon dioxide as a local anæsthetic. The patient was an adult male in apparent good health, and had a very large hygroma between the shoulders, which extended into the deep tissues around the spinal processes. The cutaneous incision was made without pain, but the enucleation of the tumor from the deep tissues was difficult and very painful. The unsightly appearance of the wound, and the shapeless, ragged, insignificant size of the tumor after its removal, I can never forget. Such a wound could heal but slowly. Hygromata developed in the floor of the mouth usually soon involve the deep tissues, and may make its appearance at the skin on the neck. This may take place very rapidly, and in that respect resembles malignant disease, and the life of the patient may be quickly destroyed by acute inflammation and pressure. The differential diagnosis from ranula is made by puncture. There is a class of congenital tumors of the neck which we must distinguish from congenital cystic hygroma. It is a variety of hydrocele of the neck where during the development of the fœtus one of the bronchial clefts failed to become obliterated in the deep structures but closed on the out side, forms a cyst or hydrocele of the neck. This tumor, however, is quite different from hygroma, more rounded in shape and more definite in outline, is a solitary cyst, and is easily removed by incision and drainage, leaving the neck in a normal condition.

†Read before the Tallapoosa County Medical Society.

Treatment by operation has proven to be very unsatisfactory, since most cases required deep dissections, the dilated lymph spaces having no respect for the deep tissues, but extending on all sides and attacking the connective tissue wherever found. Hygromata possess such low vitality that they are specially liable of spontaneous inflammation when they become hot and painful, and if the inflammation is of mild type, most generally followed by a gradual decrease in the size of the tumor, and its final disappearance. These tumors often undergo spontaneous atrophy without a previous inflammation. When left alone they rarely endanger life, consequently it is only in extreme cases where these tumors require interference on the part of the surgeon.

Report of a Case of Brain Syphilis Heroically Treated with Mercury, Followed by a Mecurial Neuritis and Recovery,

By WILLIAM C. KRAUSS, M. D., Professor of Nervous Diseases Medical Department of Niagara University, Buffalo, N. Y.

The following case of specific Meningo-encephalitis is interesting from the fact that it shows how far such cases are amenable to treatment, and also the amount of treatment such cases require, in order to attain results. These cases of brain syphilis are the only ones where complete recovery may be expected, if the anti-syphilitics are carried if necessary, to the point of intoxication. Cases of arteritis or endorteritis with consequent, embolus or thrombus formation, or disruption of the vessels with destruction or compression of the brain tissues are least liable to satisfactory treatment. While gummatous tumors if small and located in the meninges offer better advantages, larger syphilomas extending into the cortex, or affecting the base of the brain cause destruction of neighboring brain tissue, and are to be reckoned in the same class as regards results, with the sequelae of endorteritis. In other words, complete or even partial recovery is extremely doubtful in all cases where the brain substance has been impinged upon, and the prognosis must be rendered with great caution. On the other hand, cases of meningitis or meningo-encephalitis offer much better results and a hopeful prognosis dependent of course upon the thoroughness and audacity of the treatment.

Anna C., age 25 years, height 5 feet 4 inches, weight 120 pounds; complexion dark, constitution rather frail. Father and mother are living and healthy, grand parents lived to old age. There is no history of syphilis, tuberculosis or cancer obtainable. She never had any of the diseases of infancy and was always in the best of health, In 1891 she committed an indiscretion, ran away from home and lived for four years in a sporting house. Here she acquired syphilis and was treated for primary and secondary symptoms. In September, 1895, she first began to have pains, in the head, sharp shooting and continuous, beginning at the vertex and radiating downwards, in all directions. The head was tender and sensitive and felt as if "something were growing inside of it." She complained much of nausea and vomited occasionally. Bowels were loose; sleep much disturbed.

Her physician prescribed mercurial preparations and potassium, iodide. The headaches not diminishing, I was called in consultation, November 10, 1895, and found a thin, pale emaciated young woman, whose body and extremities were covered with the characteristic roseola of syphilis, suffering with excruciating pains "all over the head." She and her husband claim that the eruption followed the administration of mercury. The head was very sensitive on pressure, and was very tender and sore over the nucha. Temperature was normal, pulse was 80. I advised mercurial *inunctions* and protoiodide of mercury pills $\frac{1}{4}$ grain three times daily. After the fourth inunction, salivation appeared, and immediately the head pains began to diminish, so that in 3 days the head was entirely free from pain and she was able to be about attending to her duties. The inunctions were discontinued, but the protoiodide pills were taken regularly. She was practically in good health for six weeks: when the rash began to disappear the headaches reappeared, with greater intensity than ever before. They were accompanied by dizziness, tendency to fall to the right, nausea, vomiting and photophobia. She could not see to read or write and complained of pain in the eyeballs.

On January, 3rd, 1896. I was again called to see her and found her more emaciated and debilitated, than at my first visit. She complained of the head pains, nausea and vomiting, unable to keep even water on her stomach, while vision was markedly diminished and the room was heavily curtained on account of the photophobia. The acme of pain, she referred to the left side of the head, over the frontal and parietal regions, with sensitiveness to percussion over this area, She has of late, been misapplying words, calling for a spoon when she wanted a tooth brush, "cigarette" for a glass of water, would call the nurse

by the wrong name, and at times not be able to make herself understand at all. The lower part of the face is slightly paretic. The eyes, ocular muscles are not affected as the orbits are freely movable in all directions. The pupils are widely dilated with some difference between the two sides.

The fundus shows an acute papillitis (choked disc) on both sides.

Audition, olfaction, gustation and sensibility of the face unimpaired.

Tongue protrudes slightly deviated to the right.

Extemities.—There exists a paresis of the whole right side of the body, face, tongue, arm and leg. Dynamometer test of the hands results as follows:

	Right.	Left.
March 2,	24	29
" 6,	27	32
" 8,	30	34
" 15,	26	30
" 31,	31	35
April 10,	32	42

There is no disturbance of the general sensibility. Tendon reflexes are present, not exaggerated and without any perceptible difference between the two sides.

On March 3rd, while on a couch she complained of the right hand getting numb and found she had no power over it; hand was cold and finger nails were blue. On attempting to eat some bread and milk shortly afterward, found she could not swallow, would choke her and strangled; on attempting to place her in bed, the right leg was also paretic and for some minutes she lost all power of speech, but was conscious and heard what nurse was telling her. The whole attack lasted no longer than 5 minutes; says the hand and leg felt forcibly drawn downwards.

On March 4th, she had a similar attack of paresis, affecting the right arm and leg, lasting only a minute," During the day and night the right arm and leg would contract forcibly, the arm flexed at elbow and wrist joints and adducted at shoulder. The knee joint would be flexed and leg flexed on thigh. Her husband states that these spells occurred very often, during the night and on two occasions awakened her.

March 8th, she is thoroughly salivated so that she can barely speak. Saliva flows from her mouth. She is fed by enemata and has been for four weeks.

March 25th, the pains are very much better, there is no longer nausea, appetite is good, bowels are regular. Examination of the fundus shows the papiritis receding. The salivation still continues.

March 31. The headaches are growing less in severity and are confined to the right side of the head. Vision is improving and the photophobia has disappeared. Has not vomited since March 21st, appetite is good and bowels are regular.

She has been receiving $\frac{1}{2}$ grain morphia and $\frac{1}{6}$ grain bichloride of mercury hypodermatically since February 1st, along with tonics, enemata and a mouth wash. She continued to improve daily and on April 30th, I ceased to see her daily, having asked her to come to my office, once weekly for three months. The protoiodides were continued during this time, but not with much regularity. She has been in the best of health these three months; rode a bicycle and thoroughly enjoyed herself.

On September 1st, 1896, not having seen her for three weeks—was called to see her and found the old trouble lighted up again, Headaches, nausea, vomiting, mental dullness, prostration and papillitis were as before present. I determined to salivate her as speedily as possible, and injected 15 ♏. of a solution of bichloride of mercury $\frac{1}{3}$ grain to 10 minims, night and morning, along with inunctions of the yellow oxide of mercury ointment, to the elbow and knee joints.

On September 10th, salivation appeared and improvement began, which has continued until she was in fairly good health.

As soon as the cerebral symptoms disappeared and her usual good health was expected to return, she began to complain of weakness of the hands and arms, tiredness in walking and of pains in the elbow and knee joints. These persisted in spite of all manner of treatment. Examining the joints, there was found no tenderness in the joints themselves, no pain on rubbing the joint surfaces together, no swelling, redness or increased temperature. Assuming therefore that the pain was not articular or rheumatic it occurred to me that a neuritic process might be present, due to the mercury, inasmuch, as the joints implicated were the ones which received the inunctions. This proved to be the case inasmuch, as there existed great tenderness over the nerve joints in the upper and lower extremities, marked weakness of the hands, and a slight degree of leg drop. She complained of giving way of the hands, would let dishes fall to the floor, had difficulty in buttoning her clothes and would stumble and trip while walking. The tendon reflexes were markedly diminished. The patellar reflexes hardly responding to the stimulus.

Sensation was little, if any affected. Trophic disturbances were also wanting.

Electrical examination of the arm muscles showed quantitative changes only, the

peroneal muscles acting in a similar manner.

Analysis of the case, shows it to be a specific meningo-encephalitis affecting the frontal and parietal lobes of the left hemisphere followed by a toxic neuritis. That it was not a gummatous tumor may be explained by the large extent of territory which it covered, reaching from the longitudinal fissure to the inferior frontal convolution and perhaps extending to the base of the brain, partly.

The paresis of the right leg, arm and face with aphasia and paraphasia, the history of several attacks of Jacksonian epilepsy, limited to the right side, the absence of disturbances of the cranial nerves all point to the left—cortical region as the seat of disease. That the pathological process had not interfered permanently with the functions of the cortex, is proven by the absence of all symptoms denoting brain destruction and the return of those which were but temporarily affected. As such may be mentioned the aphasia, the hemi-paresis and the optic neuritis. These symptoms, as present, plainly showed some lesion to the brain cortex, affecting the superficial layers only either through pressure or as is most probable by a superficial inflammatory process of a specific nature.

371 Delaware Ave.

A Few Remarks about Antiseptic Midwifery.

By A. G. Ramsey, McMinnville, Tenn.

It may be possible that aseptic midwifery is practised in some hospitals, but I am of opinion that it is never applied in general practice. Indeed I am almost persuaded that it cannot be used in general practice, because the environments of most puerperal women render its application impossible. Therefore the management of lying-in women must be antiseptic rather than aseptic. The antiseptic era in obstetrics may be said to date from the year 1870. Previous to that year puerperal diseases were of common occurrence, and were more frequent in hospitals than in general practice.

Since the adoption of antisepsis in these institutions the percentage of deaths is exceedingly small, the ratio of deaths to the number of confinements being determined by the degree of refinement in antiseptic management, while in private practice, especially country practice, the death rate has not been so greatly reduced. The reason is obvious. Previous to that year a certain percentage of deaths was considered inevitable, a necessary consequence of labors in crowded hospital wards. The reduction of this per cent. to a minim under strict antisepsis demonstrated the fallacy of the idea.

If the death rate in hospitals can be thus reduced, is it not the duty of every private physician to give his puerperal women the same immunity against danger and death? Most emphatically it is his duty. But I regret to say a very large number of general practitioners fail in this duty. This is especially so in the country, as I have learned through careful inquiry. I do not arrogate to myself superior antiseptic knowledge. Indeed I am but poorly accomplished in the theory of antisepsis, and, therefore, do not claim the ability to instruct any physician in his duty on this line. My knowledge and advocacy of antisepsis are chiefly due to the daily application of simple practical antiseptic methods and their salutary results.

Looking back over a generous obstetric practice of twelve years I am forced by comparison of results to admit the advantage of antiseptic over old slipshod methods.

I did not always advocate antisepsis.

Several monuments were erected to my skepticism. No monuments have been erected for many years.

Antiseptic confinement is little more than ideally clean confinement; it is, therefore, marvelous to me that every physician who has an atom of pride does not insist on its practice.

The average ante-antiseptic confinement in my practice was disgusting and dangerous in the extreme. From the beginning to the close of the puerperal state true septic hospitality was maintained. A generous diet and a downey bed were provided, and a standing invitation was given to septic germs to enter and feast and repose on the woman's insides. The wonder is that the invitation was not universally accepted: that a large per cent. of confinements did not result disastrously. Nature is a brave fighter, and to her stubborn resistance to all evil influences must be due the small ratio of fatal results to primitive confinements.

Because the great majority of puerperal women recover in the absence of antiseptic precautions, and because they are too mentally lazy to learn antiseptic details many doctors travel in old ruts.

My dear doctors of this class, while most puerperal women recover regardless of environment and treatment, if by pursuing strict antiseptic methods you can save one life in your whole professional career, your failure to do so is little short of criminal.

Since the adoption of antisepsis in my obstetric practice I have had no case of puerperal infection, and not even a milk chill, except where antiseptic nursing was imperfect. May God speed the day of universal antiseptic midwifery.

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SILVER NITRATE--THE OLD RELIABLE ANTISEPTIC.

Credé, of Dresden, whose father was the author of the well known method of preventing and treating purulent ophthalmia, has investigated the lactate of silver, soluble in 15 parts of water and the citrate of silver soluble in over 3,000 parts of water, each of which he shows to be an efficient germicide in solutions containing one part to 80,000 parts of water. The nitrate, while more soluble than either and not possessing, outside of the body, as high a germicidal strength, is nevertheless, when brought into contact with wounds, quickly converted into the same compounds of silver with albumin which result when the other silver salts are used.

To Credé belongs the honor of having demonstrated that the compounds of silver with albumin are soluble in blood serum, and that the albuminates are not destructive to healthy human tissue, but very destructive to bacteria. They also have the power, possessed by no other agents in equal degree, of stimulating the regeneration of tissue that has been destroyed by traumatism or sloughing. Because silver nitrate has long been classed as a caustic and astringent, the practitioner is liable to overlook the fact that one application of a rather strong solution, one part of nitrate to ten parts of water, will do more work towards curing a septic wound or ulcer than many washings with mercuric chloride solution. This is especially true if the septic condition is of long standing and the germs deeply imbedded in the tissues where the mercuric salt by reason of its albuminate being insoluble in blood serum, is powerless to reach them. If the busy practitioner will carry with him the 1 to 10 solution and mop a little on every small cut, laceration, abrasion, or pus-secreting surface, and leave the part without any other protection than the scab which quickly forms, he will be surprised how seldom a second application of anything is ever needed. The same solution is invaluable in removing the cause of childbed fever, when septic absorption occurs inside the uterus or by little tears in the cervix or vagina. After carefully scraping out of the uterus matter which should not remain, the solution on a cotton probang is thoroughly rubbed over the entire endometrium and into all lacerations, after which a rapid and permanent fall of temperature may be confidently expected, provided the septic process have not penetrated the tubes, blood vessels or lymphatics beyond the reach of the antiseptic. If the temperature again rise repeat the application and give muriate of quinine to full cinchonism. The same application is the ideal treatment of incomplete abortion. Thoroughly empty the uterus and thoroughly swab it with nitrate of silver, at once, and you will have no fever or subinvolution.

Higginbottom's solution, 1 part of nitrate to 3 parts of water, was up to the discovery of ichthyol the most efficient treatment for erysipelas, but ichthyol in erysipelas is more efficient and pleasanter. When hæmorrhage from stomach or bowels occurs in typhoid fever one-fourth grain doses of silver nitrate with or without opium is an admirable remedy. When diarrhœa becomes excessive in the same disease, the same will not only check the diarrhœa but clean the tongue and lower temperature, showing its specific germicidal action.

NEW RESPONSIBILITIES.

With every advance in medical science the duties and responsibilities of the physician become more and more grave and exacting, and if he be conscientiously laboring for the highest good of his patients, he must suffer much from doubt and perplexity as to the best course to be followed in the management of disease. Shall he use antitoxin in diphtheria? He knows that the remedy is not without danger to the patient and that even when prepared by the best manufacturers, placed in the most skillful hands and used with the utmost care, it has caused death when there was no disease to account for the fatality. Shall he adhere to the expectant method of dealing with typhoid fever? He knows that the average duration of illness of patients which are treated "expectantly" is six weeks or more, and more than seventeen per cent. of such patients die. Shall he apply the Brand method? He has the word of able teachers that it has lowered the death-rate from the disease, but its strongest advocates call it "brutal," and admit that it does not shorten the course of

the fever; that it is cumbersome; that it does not diminish the danger of relapses, and that it has caused death. Yet it has many distinguished followers—one reason for which may be the prompt temporary relief of alarming symptoms and this apparent benefit to the patient may have aroused an enthusiasm that has distorted the judgment of careful observers.

Hence the physician who is primarily responsible for every life that is entrusted to his care must avoid being misled by specious argument. It is his solemn duty to adont that method of dealing with disease which will, in his opinion, give the lowest death-rate; the shortest duration of illness, and will minimize the impairment of the constitution, and most quickly restore the patient to vigorous and robust manhood.

MUSIC IN MEDICINE.

That "music hath charms to sooth the savage breast," proves to quiet and control the excited spirit or to steady the quaking corneage of man hath long been recognized. It is no wonder then that even now it is seeking position in applied medicine and is destined in the future to occupy more prominent place as a scientific factor in the healing art. The student and practitioner of the next century will witness the recognition given music, per se, in general medical teachings and college curriculums; while in its clinical application it will doubtless present many phases strikingly and specially favorable to the amelioration of disease or of the ills and complaints of the flesh. It will not be a simple esthetic cult to catch fair maidens and grand dames in our clianteles, but will come along in effectiveness with hypnotism; and other methods of suggestive or psychical therapeusis. Then somewhat occult influences have long since been conceeded, and the influence of mind over matter often witnessed. The application of hypnotism and other psychical forces to the treatment of disease in the past while to some extent decried has not met with very violent opposition, and now represented as it is by the famous school at Nancy, by many learned French and other Savants has gained accepted position in scientific therapeusis, we have each of us witnessed its power under special indication when the Chronic Rheumatic has laid aside his crutches for one healthy, vigorous step, in the neuralgic grunter, wreathed in smiles through riddance of his sincodian load in the melancholic, cheered and brightened by dreams of aroused normal, organic functional activity; yea, we have even seen the prospective mother made to usher in the new being with comfort and ease, without a thrave or pain; all wrought by the occult power of suggestion. The field of power for these occult and psychical influences over man is not utopian and is not setting a difficult or unreasonable task to claim therapeutical power of music with all its charms, its melodies and psychical powers. The trend with the profession now is to utilize, call in the aid of these occult sciences and to study, differentiate, and treat or counteract the psychical factors of disease.

It has not been so far back since the reality of hypnotism itself was regarded as a fraud and imposition, and its defenders eschewed and berated by the regular profession, still we have been constrained to accept the evidences of its efficacy and potency so ably presented by Prof. Charcot and others. The introduction of music into the field of clinical medicine will no doubt be accounted a fleeting fancy and a fad by many; in the end it will find and fill a generous field of usefullness. In the Munich Hospital of Medicine a chair has been established for the teaching of Hypnotism and we understand that at Bellevue the establishment of a similar chair is being favorably considered and no doubt others will follow. In Munich too, music is now regularly used in the treatment of certain diseases, such treatment having been no doubt advanced by the fact that the Empress of Austria was but recently treated for her neuralgic ailments of long standing and really relieved by certain strains of music repeated at frequent intervals. Dr. Paul Rivierer who introduced this treatment there and who probably applied it or directed its application in the case of the Empress, states that it is not a delusion, and that a "Music cure hospital is now underway of erection and will soon be in full sway." We are not prepared to fully explain the theory of this music cure. The effect will doubtless be exerted upon and through the nervous system, and will be proportional to the character of it's source also upon the tone and frequency of repetition while its dosage will be regulated by the character and standing of the ailment, perhaps much will depend upon the temperament and susceptibility of the patient. It will no doubt exert its most favorable influence upon children and the gentle sex.

We have all oft times noted the power and good effects of music, how the soft, tender melody of song calms our perturbed natures and how it will even quiet and lull to sleep, "Nature's balmy restorer," and have we not seen how the soft, sweet strains of melody, either from song or at-

tuned instrument, lulls to rest assuaging even grief and pain. Who has not noted that the best soothing syrup for the minor ills of the baby is the mothers tender "lull-abye" and for the grown up, fatigued and weary wanderer it is the Switzers song of "home, sweet home," even the gentle soughing of the wind among the trees and the soft ripling music of a gentle rain hath power to sooth and quiet tired, overstrained nerves. To the patriot of all climes the nation peon has a strengthening and invigorating influence, while the martial strain of band and fife, and the rattle of kettle exhilerates, encourages, and steadies the soldier in battle. So that we can see that music not alone sooths, calms and restores to health, strength and postive vigor, but is capable of producing excitement, even over excitation of the nervous, and circulatory symptoms. So that man under its sway will forget fear and fatigue, pain and weariness and not only be enabled to undergo hardships and physical strain, but even commit physiological excesses with much less detriment than when without it's aid. We can realize then how the music that lulls to rest, quieting pain and overexcited nerve can by frequent repetition be curative of certain ills or restore to the normal a disordered function. How that music by arousing and energizing the fatigued nerves exhilerating the lethargic, and dilatory circulation, day after day, will bring renewed strength, vigor and vitality to our beings. Music is not only soothing and hath power alone to charm the savage breast, but is often captivating, entrancing, even hypnotic in effect, with power sufficient to enchain, enthrall the grander intellect. This power is evidenced in the fabled songs of the Sirens along the shores of Renowned Creteluring mariners to destruction upon the fatal rocks hidden beneath the clear, blue waters; against which Power Homer tells us Ulyses stopped up the ears of all his sailors with wax, and even ordered himself to be bound to the mast of his ship less perforce of the entrancing melody of their songs he might order the ships steered upon those treacherous shores. True in fabled song, truer still this power of music in real life. From the gentle lullabye of the mother over the babe in her lap to Switzers song of "Home, Sweet Home," song in softer key to the adult wanderer on Frozen lake or desert plains, the same power sooths, calms and restores. It seems to me more surprising that this power, the varied and wonderous effects of music upon our natures in so many physiological relations, functions and conditions should not have received earlier scientific recognition, and earlier scientific effort have been made to clinically apply it to the therapeutical management and relief of our ailments, bodily ills and diseased conditions. If this freighted with no real good, it can be fought with no great evil, nor can it be incompatible with any purely medicinal line of treatment, while its esthetic and brighter phases will recommend it to our favor. Anyone who has seen the child in pain even temporarily quieted by the tender song of the mother, whether the words be of a lullabye or "Rock of Ages Cleft for me" cannot doubt the important role of music at least in allied therapeusis.

SUCCESSFUL TREATMENT OF TUBERCULOSIS.

The successful treatment of tuberculosis is a goal toward which many have striven. By none, perhaps, has this subject been more deeply studied than by Robert Koch. Not satisfied with having disclosed the cause of tuberculosis, and having given to the world that agent of such great diagnostic importance, tuberculin, this indefatigable worker has been studiously searching for a remedy that will give us some definite control over this disease. Such a remedy seems to have been found in a modification of tuberculin. The reason tuberculin is not more successful, as a remedial agent in tuberculosis, is because the reaction against tuberculin is often lost before there is a perfect cure of the disease. The *improved* tuberculin known as T. R., includes everything which pertains to immunizing factors in the culture of tubercle bacilli. Guinea pigs, which had been rendered tuberculous and then treated with T. R., showed, without exception, regressive changes in the organs which were tuberculous at the beginning of the treatment. Thus, the liver did not show the necrotic yellowish colored spots, but in place of them furrows and cinkings of the surface, which gave the organ a peculiar nodular appearance. The spleen, likewise, showed shrinkages, which in some places had proceeded so far that only a small relic of tissue was left of the organ, which could be found only after a careful search. It seems that full immunization, sets in in two or three weeks, after the use of the larger doses of T. R. A cure in tuberculous guinea pigs, animals in which the disease runs a very rapid course, takes place only when the treatment is introduced early, as early as 1 or 2 weeks after infection with tuberculosis. This rule avails also for tuberculous human beings, whose treatment must not be begun too late. Such small doses must be given at first as to necessarily

exclude any distinct immunization at the start; it is only when larger doses are reached—0.5 to 1.0 mg. that the unmistakable effects of immunization are observed. Thus there is from the start a limit in the use of this preparation. A patient who has but a few months to live, may not expect any value from the use of this remedy. And it will be of little value in the treatment of patients who suffer chiefly from secondary, especially streplococcus infection, in whom the septic process overshadows the tuberculosis. This remedy promises all that may be secured in a curative way, even in cases of tuberculosis of long standing.

ROLE OF THE PHYSIOLOGICAL CHEMIST.

When we come to the study of diseases the great tendency in recent years is to ascribe to them certain organisms and make their toxins responsible for all the concomitant symptoms. It is very true that many diseases whose nature was formerly obscure have been brought down to a scientific nicety by the bacteriologist who have proven beyond irrefragable evidence that certain definite diseases depend upon the presence of certain specific organisms. But all diseases are not due to germs, possibly not one half of all diseases are due to germs.

While the science of bacteriology is still making rapid headway so is that of the physiological chemist, and in the near future we will see this branch of medicine brought to a higher standard. He is now making plain the obscure nature of many diseases, and is probing the mysteries of faulty metabolism.

Rheumatism, neuralgia, lithæmia, gout, hemicrania, epilepsy, polio-myelitis, locomotor ataxia, and nearly all the diseases of the nervous system must be cleared up through his work.

Suppose we say that the nervous system is an organ with two functions: (1) the function of metabolism, (2) to transmit impulses set up by the five senses. Should there be a severe shock to this latter function we will have a functional disturbance giving rise to reflex convulsions, local spasms, &c. Suppose that some irritant circulating in the blood would give rise to a disturbance of nutrition or metabolic action in the nerve cells, and which disturbance is persistent, then we will have a nutritional (metabolic) dssease such as paralysis of the insane, paralysis agitans, &c. A nutritional disease does not arise from any cause detected by the microscope. But if the metabolic (nutritional) disturbance is very great and persistent there will be an alteration in structure of the heart, and we will have a structural disease polio-myelitis, locomotor ataxia, &c.

According to Gowers "all functional action of nerve elements (cells) is attended by molecular changes in them and never leaves their nutrition in exactly the same condition as before. A state is left for a time in which the same functional action occurs more readily."

Now what products of assimilation might give rise to a disturbance of nutrition or what foreign product in the circulation would give rise to the same condition should it not be eliminated? If we turn to some leucomaines which are found in the tissues of the healthy individual such a hypoxanthin, xanthin, heteroxanthin, poroxanthin and creatin, we will find that all of them if injected in sufficient quantities produce specific physiological effects. Hypoxanthine in in the frog causes increased reflex action and convulsions. Xanthine is a muscle stimulant producing muscular rigor and paralysis of the spinal cord. Heteroxanthine and paraxanthine produce a rigor mortis like condition, loss of voluntary motion and reflex action, dyspnœa and dilatation of the lungs. Creatin produces vomiting, diarrhœa, tetonic convulsions and paralysis. Uric acid is held by Garrod to be responsible for the gouty affections.

Should non-elimination of the normal constituents of the urine occur what influence would they have on the nutrition or metabolic functions of the body? Should they persist how many untold symptoms would their admixture cause? These are some of the problems for the physiological chemist to solve.

THE ART OF PRESCRIPTION WRITING.

Nothing serves to show a man's capacity more quickly than his prescriptions, and nothing adds more to his popularity than they. Let a physician once get the reputation—and how many have it?—of prescribing large nauseating and unsightly mixtures on all occasions, and he will soon find his most valuable patients, the women and children, going to his colleagues who have learned to give the same remedies in more concentrated, palatable and elegant form.

The first thing to aim at in writing a prescription is to meet the indication by ordering the exact medicament required, and to do this, necessitates an accurate diagnosis and a thorough knowledge of the pathology of that particular case and the physiological action of the remedy to be ordered.

The next step is to order nothing more. By so doing you will avoid the mistake made by many of forming insoluble compounds, which are utterly inert, or else you may fail to get the expected results on account of the antagonistic elements in your mixture. A very common mistake made by men ignorant of chemistry, is a lotion often prescribed for sprains: R. Liq. Plumbi Sub Acet. in combination with Tr. Opii. Now, either the lead lotion or the laudanum would be good, but in endeavoring to use both, you get neither, as the opium and lead are both precipitated, and as a result the only anodyne effects obtained are from the diluted alcohol of the laudanum. Be scientific in writing, and do not unnecessarily mix sulphates with nitrates or chlorides. If you wish a tonic pill for a person recovering from malaria, where the various indications—malaria, anorexia, muscular debility and anæmia—demand each a remedy, write your R. thus:

R,	Strychniæ	*Sulphat.*
	Quiniæ	*Sulphat.*
	Ferri	*Sulphat.*

Now, if it is desirable to give this in solution, the addition of a moderate quantity of dilute sulphuric acid to some aromatic water, such as cinnamon, colored and flavored by co. tincture lavender, will make a very concentrated, elegant and stable mixture. Exactness, simplicity and elegance should be accomplished when practicable.

HOW TO COLLECT A SPECIMEN OF BLOOD TO EXAMINE FOR THE MALARIAL PARASITE AND FROM WHAT TO DIFFERENTIATE.

How to Collect the Specimen.—The end of the finger or lobe of the ear (preferably) should be rendered clean by washing thoroughly with soap and water, then with alcohol, and lastly with water. Then with a tenotome make a quick thrust deep enough to permit a drop of blood to make its appearance at once, catch a cover slip (cleansed in the same manner) with a pair of forceps, and touch to the drop of blood and quickly apply to the slide (also cleansed in same manner) without pressing down. The parts should never be squeezed otherwise, too much watery constituents of the blood would be present.

We should also guard against the following: Never let the slip touch the skin, be careful to see that all the alcohol has been removed from the parts as alcohol crenates and distorts the corpuscles, carbolic acid and prolonged heat or cold will also have this effect.

From What to Differentiate.—First always examine the color and shape of the normal red corpuseles. Then the normal leucocytes, and possibly a few blood plaques although these quickly dissintegrate after being drawn from the circulation. Then observe the fibrin filaments, after forming meshes here and there throughout each field, after we may see small shining or glistening particles with a very active brownian movement turning and twisting in all directions free in the plasma. Notice these small glistening round fragments within the red globules, but without motion.

Small fat droplets may also be seen in the plasma. Free pigment of a pinkish or garnet color sometimes black may be present.

Should the film of blood be pressed down too hard, small vacuums will occur of many sizes and shapes within the red discs. Occasionally a red corpuscle will be slightly turned on itself in a certain portion into a cresent shape, leaving the other portion on the concave side looking like a cresent parasite within a decolonized corpuscle.

We should then first select a plasmodium within a red cell having its amoboid movement, note its changes, observe the color, size and movement of its pigment and compare this one with the others present.

INDICATIONS FOR TREATMENT OF PUERPERAL ECLAMPSIA.

In the present state of our knowledge, puerperal eclampsia is regarded as the result of an autointoxication due to deficient excretory power. It is not necessarily always, or entirely of renal origin in any given case. Viney regards the liver lesions found *post mortum* quite as important as those usually found in the kidneys. We know that the liver is the great home-cleaner and watch-dog of the system. A woman pregnant, especially for the first time may be unable to excrete waste for too beings, although quite able to excrete for herself alone.

The main indications for preventive measures, are proper nourishment with tonics if needed—and sufficient excretory power to promptly eliminate all waste for both mother and fœtus, any accelleration of pulse, nervousness, sleeplessness, headache, failing sight, and especially scanty urine, dry skin and œdema should be promptly investigated, and all three excretory channels thrown open. The convulsion itself is probable due to the disorganizing effect of the pois-

ons on the gray cells of the vital centers.

The indications for treatment during the convulsions are plain and emphatic: First, relieve the imitation of the vital nerve centers with chloroform, by inhalations if the heart is strong, or with a full dose of morphia hypodermically, if cardiac lesions exist. Second, promptly stimulating the excretory functions, especially the skin with hot baths in the weak or pulocanpine in the strong. Bleeding only in full blooded cyanosed patients may be beneficial, In the debilitated and anæmic it is contradicted.

The indications for treatment immediately after the convulsions are practically the same, vis.: Benumb, the nerve centers with sufficient doses of chloral, sod. bromide or tinct. verat virid to bring and keep the pulse at or near its normal rate and tension. Eliminations of the other indications is the watchword throughout the disease.

Severe, repeated convulsions accompanied with much albumenia may call for the induction of premature labor, at term rapid delivery is indicated.

AN IMPROVED SALINE SOLUTION FOR INTRA-VENOUS AND SUBCUTANEOUS USE.

We have essayed from time to time to give our readers the benefit of all new theories in reference to the use of saline solutions for injection, intra-venous, subcutaneous or by rectum, and of all new plans or methods adopted Dr. H. A. Hare in paper read recently before the Philadelphia County Medical Society gave out a formula for a fluid which he states to be a modification of Sidney Ringer's fluid, and that it is very much superior in effect to the ordinary normal salt solution, equal the power of natural blood serum. The formula he presented is as follows:

℞ CaCl. 0.1 gramme, KCl. 0.75, gramme Norm. Salt solution 1000 cc. M. Signa. For intra-venous use specially, but can be used subcutaneously, per rectum &c., as is done wtih the regular norm. salt solution. He states that it has been proven by experiment that the calcium salts are essential to the clotting of the blood and by experiment on frogs and observing the character of the beats it was shown that blood serum itself sustained the heart beats long and well, but that a solution of the albumens of the serum without the salts does not sustain the beats well, nor does a simple normal salt solution; the addition of the calcium salt alone to the normal salt solution causes strong beats which are too prolonged and therefore inefficient, but the addition also of a small amount of the potassium chloride corrects the character of the beat and that this combination, normal salt solution plus calcium, plus potassium will sustain the heart beats as well as and as long as blood serum itself will do it. Ringers solution is 100 cc. of a 75 per cent. solution of sodium chloride saturated with calcium phosphate, adding 1 cc. of a 2 per cent. solution of Potassium chloride. This it is said is not convenient for use in surgery as the boiling necessary for sterilization precipitates a phosphate of calcium, while the modified fluid can be made up in Florence flasks which can be boiled and kept sterilized for accident work and warmed at any time for use by placing flask in a pail of hot water. The effect of this modified fluid is very certain and withal more permanent than the ordinary normal salt solution. This fluid has now been in constant use at the Massachusetts General Hospital for about two years and some remarkably wonderful results have been obtained by its use. Dr. Hare states that as the injection is given intra-venous, the patient will often show signs of improvement at once, but in from 2 to 30 minutes he develops a rigor, with strong, rapid pulse, followed in half an hour with great flushing of the skin and then a profuse sweat, with greatly increased urinary secretion. Sometimes quite a marked febrile movement takes place and several hours afterward the patient finds himself greatly improved. In the paper refered to Prof. Hare lays great stress upon the use of the fluid for the purpose of *washing out* the blood in threatened or present toxæmia arising from disease, diabetes, or any acute infection whether due to specific micro-organisms as in the eruptive fevers, or septic infection from any cause, his own experience being limited to cases of uræmia and toxæmia associated with gangrene; he cites numerous instances however of its efficacy for above named purpose given by various authorities showing the broad field of its usefulness. Its use for this purpose, washing out the blood has become very popular with continental physicians and is particularly used in France. Intra-venous injection of the normal salt solution, Hypodermoclysis, injection per rectum in full quantities high up in the bowel for the relief of collapse, shock &c., are now recognized proceedures; its technique has been fully given in past issues of this journal and by many authorities, with description of apparatus and means of using the same and are not here necessary. In the face of its simplicity, nonpoisonous, freedom from danger under ordinary care and its general applicability affording such

prompt and permanent relief in many instances snatching patients from the grave, it will hardly be excusable in the practitioner of today not to be able and ready to administer this remedy on occasion or demand. Our opinion is that every doctor should not only be prepared to use it but should give it preference and precedence in many of the cases heretofore tediously relieved by hypodermics and stuffing a weakened stomach and already overtaxed digestive system in order to tide over a crucial period or to build up during a slow and oftimes uncertain convalescence. We are also of the opinion that while it has been variously utilized and already covers a wide field or array of diseases and conditions, it has still not yet been fully developed and its usefulness will be strengthened and broadened year after year, with constant and continued success such as no other therapeutic measure, excepting the use of the Hypodermic syringe has ever achieved. When once you have witnessed a successful result of its use you will not only be captured but captivated.

CHIPAULT'S METHOD OF TREATING POTT'S DISEASE.

Until recently, the almost universally accepted treatment of tubercular caries of the spine was by recumbency and fixation or by removal of the superincumbent weight by means of some suitably applied apparatus. Any attempt at mobilization of the osseous structures or obliteration of the deformity by operative interference have been fraught with disaster to the patient. In the more exposed parts, as the hip, knee or ankle, correction of the malposition is oftimes obtained by operation which attempts removal of the diseased parts; but interference short of this will destroy not only the integrity of the part but frequently also the life of the patient as well, excepting where graduated correcting force is carefully applied for a long period of time. Recently, however, Chipault, of Paris, has proposed a method of procedure which aims to correct the deformity suddenly and completely by a crushing force applied over the points of greatest prominence, the patient being anesthetized and in the prone position. After correction is obtained, plaster-of-Paris is applied and kept on for three or four months and then re-applied. This support is kept up for a year or more, at the end of which time ossification is supposed to have taken place.

This is an age of surprises and changes in the established treatments of many conditions, but the change in this case has been of such sudden and radical nature that it will be some time before it is adopted by American orthopedists. However in the past we may have been mistaken as to the nature of tubercular bone lesions, for indeed they are remarkably resistent to treatment, and this method may be the means of curing such cases both more quickly and without deformity.

Another startling procedure proposed by Chipault is that of cutting down upon, freeing laterally and wiring the spinous processes of the vertebrae firmly together, endeavoring to hold them thus in line, to correct a lateral curvature. This may be done upon a skeleton or cadaver but living bone will be cut through by the wire and the final results defeated by such a procedure. This is especially true when one considers the amount of force necessary to hold a spine straight after it has been deviated for any length of time and in which there is any degree of rigidity, and if these are not present, the curve can be readily obliterated by proper gymnastic and development exercises.

THE NEW TUBERCULIN.

Prof. Koch has recently introduced a new Tuberculin. The old tuberculin was a glycerin extract of a tubercle culture. This he originally claimed as a valuable diagnostic agent, and he still claims that it is a most effectual means of diagnosis at a very early period, and of value before any of the characteristic physical signs have appeared, both in man and animals.

Now the new tuberculin is prepared by a mechanical destruction of the bacilli. By triturating dried cultures in an agate mortar adding distilled water, and subsequently using a powerful centrifugal machine, he eliminates the "sebacic acids." A whitish, opalescent fluid is thus obtained, the sediment containing the *debris* of the bacilli and any bacilli not destroyed by the trituration. The sediment is dried and again submitted to the same process, the second sediment being similarly dealt with, and so on till only a series of clear opalescent fluids remain. The first fluid obtained he calls tuberculin O, and this, treated with glycerin, contains the substances soluble in glycerin, being, therefore, similar to the old tuberculin, and, like the old tuberculin, causes reactions, but does not confer immunity. The second fluid he calls tuberculin R. and glycerin, on being added to this, produces a cloudiness due to the presence of substances not soluble in glycerin. This second fluid, or tuberculin R, is the new tuberculin.

Prof. Koch points out that persons may

have tuberculosis for years without acquiring immunity, and that even those who have been cured are liable to re-infection. He believes that in the chronic form this is owing to the lack of opportunity for the absorption of the bacilli or their products. The bacilli are present in the tissue in small numbers, and are generally surrounded by dead tissues, or if numerous, as in cavities, the conditions are too unfavourable for the production of immunity by slow absorption. On the other hand, in acute miliary tuberculosis, he believes that the bacilli are at first present in large numbers, and after a short interval these largely disappear, which he attributes to the acquired immunity, coming, however, too late to save the patient. If, he argues, we can in any way imitate what occurs in acute tuberculosis, and at the same time avoid the fatality of the acute affection, we shall confer immunity upon the organism, and this problem he believes has been solved by his new tuberculin. The remedy is given just in she same way as the old tuberculin, beginning with a very small dose, which is increased gradually till the maximum dose is attained. The fluid is said to contain ·008 grms, of the active principle to each cubic centimetre. It is diluted with salt solution when used, the initial dose being one five-hundredth of a milligram. If, however, a reaction follows, the dose should be still further reduced. The injections are given every alternate day, the dose being gradually increased during a period of two or three weeks to 20 milligrammes. If the temperture is elevated another injection must not be given till it has subsided.

TREATMENT OF CONGESTED KIDNEY AND ACUTE BRIGHT'S DISEASE.

It is understood that the present article is limited to those cases which are not due to heart disease or other chronic lesions which may render them incurable. Acute congestion of the kidneys is a very alarming and often a very sudden malady. The fibrous capsule of the kidney being unyielding, there is not only blood stasis but pressure and arrest of function, partial or complete, which is soon followed by very grave symptoms. Dropsy may or may not be present, but nearly always there is headache, dyspnœa, scanty urine, deep seated pain in the back over the kidneys and certain nervous symptoms which may develop into delirium, coma and convulsions. A specimen of the urine is tested, and if albumin is found we call the case Bright's disease or nephritis, but convulsions occur in many cases where no albumin can be found, but the quantity of urine is much below normal. It is in such cases that Dr. Rachford, of Cincinnati, has found xanthin and paraxanthin in the urine. When these are present we may expect good results from his treatment: A saline laxative before breakfast, and one grain of potassium permanganate an hour after each meal. If seen early the congestion may often be quickly relieved and function re-established by dry cups and diaphoresis. If the cups are to do good they must be large and must draw hard. A half pint glass is none too big and the edge should be coated with a little tincture of benzoin to make it stick. Two large cups to the back, one over each kidney, left on half an hour, will quiet the pulse, relieve pain and check convulsions with a promptness only equalled by venesection. Then, two quart bottles are filled with boiling water. A stocking is dipped in hot water and drawn over each bottle, and one placed on each side of the patient in bed in a warm room. Hot lemonade or flaxseed tea is then given, and profuse perspiration soon follows and should be kept up for a number of hours till the patient's mind is clear and appetite returning. After this the saline cathartics, such as potassium bitartrate, or magnesium citrate are useful, but the stimulating diuretics, such as juniper, turpentine and squills often increase the congestion and should be avoided.

Small doses of oil of eucalyptus with Hoffman's anodyne is a useful remedy after the cups to promote diaphoresis and diuresis, and prevent cystitis:

Ol. Eucalyptus..... ℳ. xii.
Spts. Aetheris Comp..... f. ʒii.
M.—Sig: 15 drops in water every 2 hours.

If the patient have a gouty or lithaemic diathesis lithium carbonate, 4 grains in a glass of water or lemonade, 3 times a day, will often do good work, if the patient will curb his appetite for sugar, starch and alcohol.

Venesection or veratrum hypodermically should probably be reserved for plethoric cases, where cups may fail to stop convulsions.

As curative agents to prevent recurrence, especially if albumin be present in the urine, nitro-glycerine and the chloride of gold and sodium are surprisingly good remedies.

GIVE THE PATIENT THE BENEFIT OF THE DOUBT.

Do not undermine his courage by giving a fatal prognosis when diagnosis and prognosis may admit of doubt. Some practi-

tioners are prone to give a very grave view of the case to the family in order that if recovery occur the doctor may receeive credit, and if not, he may escape blame. But when we discourage his friends and set them to wearing long faces in his presence, we also indirectly throw about the patient an influence that may work his downfall. This is treason. The family physician should be the leader of a hopeful army ready and willing to battle with disease against all odds, and unwilling to admit that defeat is possible. Of course, when such a position is taken, no pains should be spared to maintain it, and all our knowledge, art and ingenuity be applied.

Particularly in old people are men in the habit of jumping at the conclusion that the recuperative powers are exhausted. Dr. N. F. Graham, of Washington, published in the Medical News, several years ago, a series of cases, demonstrating as the result of his ripe experience, that aged people bear grave surgical operations nearly if not quite as well as those of middle age. There is usually less inflammation and febrile reaction. The repair of broken bones in the aged is, of course, slower, but even in that worst of all fractures, intracapsular fracture of the femur, the prognosis is *de facto* neither fatal nor hopeless.

All experienced men agree that the treatment of a case, of whatever nature, is of more importance than refinements of pathological diagnosis. And the treatment certainly includes supporting the courage of the patient. The three maladies that make up the largest proportion of incurables, consumption, Bright's disease and cancer, are often curable if radical measures be instituted in the early stages. The number of recorded cases in which tuberculosis has been cured is daily increasing, and if all tuberculous animals were stamped out, and all tuberculous people prevented from scattering the virus, this scourge would soon cease. Even insanity is becoming more and more amenable to treatment if taken before degenerative changes have occurred.

Dr. Sprague, of the great Danvers Asylum, remarked that; "A case of melancholia if properly treated and prevented from committing suicide will always recover, it may be in six months or in ten years, but he will recover."

HINTS ON DOSAGE.

Referring to a recent work on therapeutics, I find the following doses recommended: Chloral gr. ii-xx; strychnine gr. 1-60 to 1-12. Morphine gr. 1-6 to 1-2. Calomel, gr. 1.20-x and so on through the whole list. When must the minimum dose be given, and when the maximum? and what about the medium dose? Of course it is very necessary that text-books should give us some latitude in doses, but they should also give us the indications for the various doses. My rule is to give the smallest dose that will get the desired effect, but never to cease increasing it, and decreasing the time—interval until such result is obtained. This does not apply to drugs with cumulative action. On the other hand, when I am confronted with cases that demand prompt and heroic treatment, such as trismus nascentium, tetanus, opium or chloral poisoning, I use the largest dose possible, and repeat it at short intervals until pronounced results manifest themselves. I have given in chloral poisoning gr. 1-2 of sulphate of strychinia hypodemically, and repeated this dose twice at intervals of fifteen minutes, nor would I have hesitated to give a fourth or a fifth dose had not muscular twitchings shown that the physiological action of the drug had been obtained. This case, recovered in spite of the ounce of chloral hydrate taken with suicidal intent. In opium poisoning, I inject atropin in doses, ranging from gr. 1.30 to 1-4 every five minutes until the pupils commence to expand, and then the case is watched closely and the drug administered cautiously and at longer intervals. I never resort to flagellations, coffee, cold water and such cruel and unscientific treatment, for in atropia we unquestionably have the physiological antidote to opium. I never allow my morphine cases to be aroused, but let them sleep on and rest while the antidote is being used; and I go home and go to bed as soon as I find the pupil about twice the normal size and sensitive to a sudden light.

Medicines vary greatly in their effects when given in small often repeated doses, and in full doses at longer intervals, and each drug has its own peculiarity in this respect. These peculiarities should be carefully studied.

THE ALLIS CLASSIFICATION OF DISLOCATION OF THE HIP.

Dr. O. H. Allis has recently suggested a simple and rational division of all dislocations of the hip joint. The results, based upon a long course of experimental work upon the cadaver and upon careful study of dislocations occurring in actual practice, are at once so readily understood and so thoroughly practical as to make them important to all physicians.

Consider the pelvis if placed upon its

back upon a table; then the pubes is the highest and the sacrum the lowest part. In this position we usually place the patient to administer an anæsthetic and to make our attempts at reduction. Thus placed the sockets lie about midway between the level of the pubes and the table-top, and look outward and upward; and likewise the sockets are situated at the junction of two irregular bony surfaces: *the inner*, or pubo-ischiatic; *the outer*, or ilio-ischiatic. These surfaces are called the *inner* and *outer* planes; they meet at an angle of about 90 deg.

If the head of the femur escapes upon the inner plane—no matter where—the entire lower extremity will present an entirely different series of phenomena from those of a dislocation upon the outer plane. Great stress is laid upon the anatomical shape of the pelvis, because it gives us a rational classification of all dislocations into *Inward* and *Outward*.

Supracotyloid, ischiatic, obturator and other like terms are useless in assisting the surgeon to find out how and in what path the head escapes upon the inner or outer planes. The only reason for assigning a name to a dislocation is that it *gives the key to its restoration*.

During the act of dislocation the head of the femur, in passing from the socket to its final resting place upon the inner plane, may have been momentarily of course, in the position occupied by several of the various dislocations—as ilio-pectineal and subspinous—yet to give the dislocation any such certain final name does not furnish us the least notion of the path traversed by the head in its movement from the socket. This applies with equal truth to dislocations upon the outer plane.

What we desire to know is what path the femoral head traversed; and knowing this we try to make the head retrace precisely the course it followed when the dislocation occurred. In thin persons, after an outward dislocation has taken place, the socket can sometimes be outlined. If the socket can be distinctly outlined the dislocation must be outward, and cannot possibly be inward.

MEDICAL EXPERTS AND THEIR TESTIMONY.

The subject of expert testimony in medico-legal cases is now commanding considerable attention in this country. Whether it is wiser to adhere to our present policy, viz.: where both plaintiff and defendant select their own experts, or to replace our method by a system of court experts—medical experts appointed for long terms by the court and paid from the public treasury—are the phases of the question under consideration.

In France the latter plan has been adopted and seems to give general satisfaction. There, both sides are afforded ample opportunity to present their views through *their own* experts to the court experts, who give to the court their unbiased opinion of the merits of the case from the medical standpoint.

Our system is open to serious objections. Too frequently expert medical testimony is influenced by matter which should never affect cases. Often the fee of the medical expert is contingent upon the outcome of the case. It is hardly possible that this fact does not, in some cases, influence testimony. Again, physicians wholly incompetent to give expert testimony are called to the stand.

An illustration of this occurred during the past year.

A *medical expert* testified that two prominent surgeons, who attended the plaintiff when he was injured and also gave their testimony during the trial of the case, were guilty of gross carelessness and mal-treatment. This was a serious accusation, and unless it could be overcome, the case would be lost, but he, the plaintiff would have further cause for action against his physicians. The reputation of the physicians would also suffer seriously.

The *medical expert*, who had accused his brother physicians of carelessness, was requested to state what his treatment of the case would have been. He described an operation, which he would have performed in order to cure the patient. Asked his authority for such treatment, the work of two distinguished surgeons were given.

These works were produced by the plaintiff's physicians and instead of supporting they distinctly contradicted the defendants expert. It was also shown that the operation advised by the defendent physician was not devised until three years after the plaintiff was injured. Of course, the plaintiff won his case.

This shows how carefully medical experts should give evidence. They should be absolutely sure of authorities quoted or cited No bias should control their evidence. Lack of both careful preparation and strict impartiality will hasten the time when medical experts will be appointed by the court.

Never neglect to examine the lungs in all cases of ischio-rectal disease and fistula in ano.

BOOK REVIEWS.

REFERENCE BOOK OF PRACTICAL THERAPEUTICS. By various authors. Edited by FRANK P. FOSTER, editor of the New York Medical Journal and of Foster's Encyclopedic Medical Dictionary. In two volumes. Volume II. New York: D. Appleton & Co. 1897.

The author states in the preface that the leading idea in the preparation of this work has been to make it pre-eminently serviceable to the practicing physician. It is not intended to take the place of treatises on materia medica, or on pharmacy; hence, as regards the physical properties of drugs, their mineralogical, chemical, botanical or zoological relations, etc., the endeavor has been to set down only so much as is of direct bearing on the use of these drugs in medical practice or in the management of poisoning due to them.

Even accounts of the physiological actions of drugs are condemned, for much of what the experimental pharmacologist justly looks upon as essential to the prosecution of his studies is useless and clogging superfluity to the physician in his daily work of treating the sick. For the same reason, profusion of references to literature has been avoided, although at the same time it is believed that due credit has been given as to sources of information.

The above paragraph describes the scope of the work very nicely. It is one of the most complete works on Practical Therapeutics that the writer has seen. Dr. Foster has certainly utilized with the judgment of the skilled editor in selecting the writers of his new book, His long connection with the "Encyclopedic Medical Dictionary" and the New York Medical Journal, a very able journal, naturally brought him in close relation with the leading men in our profession throughout the country. The range of this work is not limited to the action of drugs, but includes curative measures of descriptions, outside of surgical methods, such as the use of the diets, exercise, massage, climate, heat and cold, hydriatics, electricity, condensed and rarified air. Each subject is treated according to its importance, and may readily be found on account of the alphabetical arangement and prominent type of the headings. The work is in every sense worthy of hearty commendation. The authors are to be congratulated on the appearance of the volume, and the publishers have done their part exceedingly well.

THE MENOPAUSE. By ANDREW F. CURRIER, A. B., M. D., New York City. New York. D. Appleton & Company. 1897.

It has been many years since an original work on the Menopause in the English language has appeared before the public. Tilts work upon this subject was long the only one of its kind and was last seen in print about fifteen years ago. That work was useful in its day, even if it did hand down the bony tradition, which has long been current from time immemorial among both the laity and the profession, that the menopause is an experience fraught with peril and difficulty. This and all similar teaching the writer declares to be incorrect and unwarrantable. This work, though brief, is very valuable. The writer has grasped the subject in a phhilosophical and scientific manner. The writer lays great stress on the subject of the artificial menopause. He also wishes to controvert the prevalent idea that there is in some way the most intimate relationship between cancer, especially cancer of the womb and the breast, and the menopaus. The work contains something over 370 pages and opens up an entirely new and interesting field in medicine. The book is well bound and printed.

LIPPINCOTT'S MEDICAL DICTIONARY. A Complete Vocabulary of the Terms used in Medicine and the Allied Sciences, with their Pronunciation, Etymology and Signification, including much collateral information of a Descriptive and Encyclopœdic Character. Prepared on the Basis of Thomas's Complete Medical Dictionary. By RYLAND W. GREENE, A. B. With the Editorial Collaboration of JOHN ASHHURST, Jr., M. D., LL.D., Professor of Surgery, and Professor of Clinical Surgery in the University of Pennsylvania. GEO. A. PIERSOL, M. D., Professor of Anatomy in the University of Pennsylvania. JOSEPH P. REMINGTON, Professor of Theory and Practice of Pharmacy in the Philadelphia College of Pharmacy. Philadelphia: J. B. Lippincott Company; London: 6 Henrietta Street, Covent Garden. 1897.

It is needless to say that Lippincott's Medical Dictionary is entirely up to date in every respect. Its form is the result of ripe experience in printing lexicographic works, its data are unimpeachable, and its eleven hundred and fifty octavo pages contain all that any student of medicine will need for a decade or two to come. Among its numerous valuable qualities may be mentioned conciseness and lucidity of expression in defining terms, descriptive and encyclopœdic treatment of leading subjects. Convenient arrangement of matter for consultation purpose being presented in alphabetical order. The phonetic system of pronunciation, abbreviations used, and key to pronunciation, also table of weights and measures. In spelling both old and new forms are used,

but in pronunciation the English method has been given precedence. At the same time it is admitted in the preface that the Roman pronunciation is increasing in use. This work was the task of the founder of the J. B. Lippincott Co., and for a generation his production has been the standard. But with the advance of medicine as a science, and in all its phases it became necessary to enlarge the scope of the foundation volume, and this has now been done with such judicious care and learned insight that the present magnificent book is destined to take its place in the van of the newer medicine of today as its predecessor did in the front rank of the sciences of its own era. The Lippincott Company should receive the hearty congratulations of every medical practitioner for this rich addition to the literature of the healing art.

An Illustrated Flora of the Northern States, Canada and the British Possessions. By Nathaniel Lord Britton, Ph. D., and Hon. Addison Brown. In these volumes. Vol. II Portulacaceæ to Menyanthaceæ Ferns Carpet-weed. New York: Charles Scribners' Sons. 1896.

This is the second volume of the most complete illustrated Flora published in this country. It illustrates and describes every species from the Ferns upward. This work serves as an independent handbook of Northern Flora and as a work of general reference and as an original and supplement to the manuals of systematic botony in current use. The volume contains 612 large pages, profusely and handsomely illustrated and to the botanical student a most useful and an indispensable work.

Transactions of the Southern Surgical and Gynecological Association. Vol. IX. Held at Nashville. 1897.

These transactions make a most complete and valuable volume. The volume contains nearly five hundred pages, is neatly printed, nicely bound, making it a very durable and useful book to have in the library. Very few transactions of any Society compare in excellence to the one now in question. Dr. William Elias B. Davis is the capable Secretary, and to him we tender our thanks for this volume.

LITERARY NOTES.

The Living Age, for all its fifty-three years of life, was never fresher, more vigorous or more valuable than now. Timely and able articles on the leading questions of the day, papers of interest and value, biographical, historical and scientific, are always to be found within its pages. The following partial contents of recent issues will give a slight idea of its world-wide scope and variety.

"Some Changes in Social Life During the Queen's Reign," by Sir Algernon West; "The Apotheosis of the Novel under Queen Victoria," by Herbert Paul; "'The Integrity of the Ottoman Empire' as a Diplomatic Formula," by Wemyss Reid and J. Guinness Rogers; "The Statesmen of Spain," by Emilia Pardo Bazan (translated for The Living Age from the Deutsche Revue). "Among the Liars" is the title given to an account of a visit paid to Crete a couple of years ago, and is of interest at this time when the name has become so tragically familiar. "Russia on the Bosphorus" if of more than ordinary interest, emanating, as it does, from the pen of an English naval officer, Capt. J. W. Gambier, R. N. "Henryk Sienkiewicz," the "Polish Tolstoi" as he has been called, by Edmund Gosse; "1497-1897: East and West," by Edward Salmon; "A Common Citizenship for the English Race," by A. V. Dicey; "Recollections of Fredrick Denison Maurice," by Edward Strachey; "The Twentieth Italian Parliament," by "Ouida"; "The Birds of Tennyson," by Edgar Valdes; "Brahms and the Classical Tradition," by W. H. Hadow; "The Position of Non-Conformity"; "The Passing of the Fur Seal"; "Herr Richter's Great Speech"; the attractive serial "In Kedar's Tents," by Henry Seton Merriman, which continually grows in interest; some good short stories and equally good poetry, with the Monthly Supplement devoted to American magazines, extracts from New Books, and a List of the Books of the Month, vindicate the claim of its publishers that The Living Age is a reflection of the world's best thought and literature.

Published at $6.00 a year by the Living Age Co., Boston.

The beginning of a new volume of the Review of Reviews is signalized by an expansion of the name of that very successful and widely-read periodical. It has now become the American Monthly Review of Reviews, with particular emphasis on the first two words. It seems likely enough that the public will speedily fall into the way of calling this magazine the American Monthly for short. It is announced, however, by the editor, that the full and formal title will remain the words Review of Reviews. The magazine is especially devoted to public affairs and topics of the time, and its presentation of all such matters is conspicu-

ously from the American point of view. Its reviews and condensations from American and foreign periodical literature form a very acceptable part of its monthly bill of fare; but inasmuch as this work of reviewing the periodicals occupies very much less than half of the space of the magazine, it is obvious that the title Review of Reviews comes far short of expressing the full scope of the periodical. As an ordinary designation, the words American Monthly will better fit the facts of the case. Nevertheless a great prestige and reputation have been built up by years of hard work under the title Review of Reviews, and it is not intended that the expansion of the name shall result in the sacrifice of any part of the recognition and credit that have accrued to the name as it has stood hitherto. The magazine continues under the editorship of Albert Shaw, and the public is distinctly informed that the expanded title, appearing on the cover for July, "implies not the slightest degree of change in the plans, Methods, aims, scope, editorship, management, or control of the magazine."

Lippincott's Magazine for July, 1897.—The complete novel in the July issue of Lippincott's is "A Mountain Moloch," by Duffield Osborne. The scene is an otherwise unknown island in the Pacific settled in remote age by Phenician exiles, and ruled by their descendants. The hero is an American naval officer, who leaves his ship for love of a native princess; and the adventures and bloodshed are worthy of Mr. Rider Haggard in his palmiest days.

Other stories are "William's Spree," by Louise Boynton, and "The Haunted Burglar," by the late W. C. Morrow, author of "The Ape, the Idiot, and Other People."

Dr. Francis E. Clark, founder of the Christian Endeavor Societies, who is now visiting the trees of his planting in remote parts of the earth, furnishes a vivid sketch of "A Plague-Stricken City," written during a recent sojourn at Bombay when the bubonic plague was at its height. The article will be of special interest to the Endeavorers, and to readers in general.

"The Evolution of Newspaper Advertising" is traced through its various stages by Oscar Herzberg. Ingram A. Pyle has a paper on "The American Drama," and Ellen Duvall one on "The Decline of the Hero."

In "The Play of the Broncho," Allan Hendricks describes an experience which the reader will be loth to emulate. Annie Steger Winston writes appreciatingly on "The Fantastic Terrors of Childhood." Lawrence Irwell tells of the theory and practice of "Suicide among the Ancients," *i. e.*, the Greeks and Romans; and "Quarantine for Cattle" in this country—an unfamiliar subject—is illuminated by H. H. Bowen.

The poetry of the number is by Mary E. Stickney, Carrie Blake Morgan, and Clinton Scollard.

The second volume, strictly speaking, of Allbutt's System of Medicine (we do not include in the enumeration Dr. Playfair's work on Gynæcology which is a separate issue by itself) is announced as ready for publication by The Macmillan Company. The contents of this eagerly-looked for volume include Infective Diseases of Chronic Course, *e. g.*, Tuberculosis and Leprosy; Diseases of Uncertain Bacteriology, Measles, Scarlet Fever, Mumps, Small-pox, Whooping-Cough, etc., Typhus Fever, Yellow Fever, Dysentery, Infective Diseases Communicable from Animals to Man, Rabies, etc.; Diseases Due to Protozoa, Malarial Fever, etc. The book closes with some special papers on Intoxication including Poisonings of various kinds, Alcoholism, etc.; Internal Parasites, and a few addenda to early articles. As usual, there are serviceable indexes and all that is necessary to make a work of such great intrinsic value easy of reference.

Among the contributors we notice the names of Dr. William Osler, of Baltimore, writing on Malaria, etc.; Dr. Ernest Hart, Editor of the British Medical Journal; Dr. Henri A. Lafleur, of Montreal; Dr. Kenneth Mac Leod, Professor of Surgery in the Medical College of Calcutta; Professor Charles James Martin, of the University of Melbourne; Dr. G. Sims Woodhead, Director of the Research Laboratory of the Royal College of Physicians and Surgeons, London.

No pains have been spared to make the work the best of its kind, and, as is shown by the above list, the editors do not hesitate to send to any part of the world, however distant, for the contributions of those whose experience has made them the best authorities on individual diseases or classes of disease.

The very successful group of college articles in Scribner's Magazine is concluded with Judge Henry E. Howland's account of "Undergraduate Life at Yale" in the July issue. Judge Howland has kept in close touch with Yale life from 1850 to the present day, and his article is the very cream of nearly half a century of reminiscences

and anecdotes. From a store of memorabilia he has also restored something of the student life in the eighteenth century. What Judge Howland has to say of the famous Yale secret societies will be widely commented upon. As a member of the University crew of 1854, his remarks on rowing are also unusually pertinent. A picture of the '54 crew from an old dauguerreotype is one of the most interesting pictures. The well-known artist, Orson Lowell, spent several months at Yale, drawing a series of original sketches to illustrate this article.

Sugar Bounties and their Influence.—Dr. Harvey W. Wiley, in the July Forum. The refining interests of our country already command such expert technical skill, such methods and machinery, as to enable them to take care of their own business without any favors from Congress. Legitimate profits in refining sugar can be easily secured without the unreliable discrimination in color made possible by the Dutch standard, and without the aid of any differential duty on refined sugar, or any complicated method of levying duties on imported sugars.

Unless the other sugar-producing countries of the world take some restrictive action, it is hard to say where the policy which is now controlling European producers will lead them. Instead of diminishing, we see the premiums on exports increasing, France has met the direct bounty offered by Germany, and is prepared to go further. Other sugar-producing countries in Europe are clamoring for the same degree of support furnished by Germany and France. Unless an end is put to this merry war, it may go on until sugar can be delivered in London at simply the cost of transportation, or at a still lower figure.

The Sterilization of Catgut after Hofmeister's Method.

According to Dr. H. N. Vineberg of New York (Am. Gyn. and Obstet. Journal) the ideal suture and ligature material in Abdominal operations must always be that which becomes absorbed. He says non-absorbable ligatures and sutures may give rise to trouble months and years after the operation, as has been abundantly demonstrated by experience. Cat-gut possesses the quality of absorbability, but has the disadvantage of being difficult to sterilize. Various methods have been employed, each of which possesses some objectionable features. The method I have been heretofore following, that of subjecting the gut to a dry heat of 280 deg. to 290 deg. F. for a period of three hours, certainly destroys all germs and spores. But it requires great care, and frequently the cat-gut is rendered rather brittle. The chief difficulty in sterilizing cat-gut has consisted in the circumstance that it would not stand boiling in water. By the process recommended by Hofmeister, this difficulty is overcome. The cat-gut is first immersed in a solution of formalin varying from two per cent. to four per cent., according to the size of the gut. It must not be forgotten that the formalin in commerce is only a forty per cent. solution. Hence in making a two per cent. or four per cent. solution this dilution should be made accordingly. It is allowed to remain in this solution for a period varying from twelve to forty-eight hours. The very finest needs immersion for only twelve hours in a two per cent. solution, the fine twenty-four hours in two per cent. solution, the medium thirty-six hours in four per cent, solution, and the coarsest used for pedicles forty-eight hours in a four per cent. solution. It is then placed under a stream of running water (under a faucet) for twelve hours to completely wash out the formalin. It is next boiled in water for fifteen minutes, after which it is transferred to a vessel containing alcohol where it may be kept until required for use. It is well to add carbolic acid to the alcohol (from two per cent. to four per cent.). This renders the gut more firm, but it should be removed from the carbolic alcohol some time before using, and kept in plain alcohol, so as to remove the carbolic acid. The secret of success in this method of preparation is to keep the cat-gut in a high state of tension until after it has been boiled. Hofmeister recommends for this purpose that the gut be rolled tightly on glass plates. This is not sufficient. I tried vrrious means without any success until I obtained a small apparatus devised by Dr. F. Lange.

It is a steel frame, six by eight inches, composed of two cross-bars and three uprights, the latter passing loosely through holes in the former. The centre upright has at its upper end a transverse bar which serves as a handle, and its upper third has a screw arrangement, as has also the centre hole in the upper cross-bar.

The cat-gut is wound tightly on the frame, and then, by giving the centre upright a couple of turns, the catgut is rendered very taut. There is no need of screwing the frame further apart until it is taken out of the formalin solution. Another couple of turns of the screw will be needed when the material is ready for the boiling process.

Of course care must be exercised not to use too much force in screwing the frame, for if the cat-gut be rendered too taut it will break during boiling, and be unfit for use. I have thus far had only a limited experience with cat-gut prepared in this way, but the results have been good, and Dr. Lange tells me he has been using it for several monts, and has found it exceedingly satisfactory.

Principles Underlying Sero-Diagnosis.

Dr. W. H. Walch (American Medical Association, June 5, 1897) called attention to the importance of a proper diagnosis of typhoid fever in its early stages, especially in the South, where the prevalence of malarial and continued fevers made the clinical diagnosis difficult. The discovery of the typhoid bacillus was not immediately followed by the practical results in diagnosis and treatment consequent upon the discovery of the diphtheria and tubercle bacilli. Numerous attempts had been made to obtain cultures of the typhoid bacillus; first, by the juice of the spleen, withdrawn by a hypodermic needle, but the results were unsatisfactory, and moreover the danger of injury to the organ was considerable; cultures made from rose spots were tried, but proved unsatisfactory. The results obtained with cultures made from the flood were more apparent, but large quantities of blood, as much as ten cc., were required. With culture obtained in this way good results had been obtained in twenty-seven per cent. of cases. The Elsner method of obtaining cultures from the stools marked an advance in the diagnosis of typhoid fever, but it was disappointing in that its field of usefulness was limited.

The modern method of sero-diagnosis rested upon Pfeiffer's discovery of the principles of artificial immunity, but Pfeiffer's reaction, so-called, had nothing directly to do with the reaction in serum immunity. The principle of Widal's test was that by the addition of one part of blood-serum to ten parts of fluid containing the typhoid bacilli a reaction takes place whereby the bacilli lose their motility and clump together. It had been ascertained by Dr. Wyatt Johnston of Montreal that this power of producing agglutination of the bacilli was retained by dried blood as well as fresh, Dr. Welch was of the opinion that the best method of obtaining the blood was by an incision, or by pricking the lobe of the ear, rather than by blisters or the opening of a vein. This power to cause agglutination of typhoid bacilli possessed by the blood serum of typhoid patients was also possessed by other serous fluids, as the serum from a blister or the fluid from a serous cavity. High temperature destroys the power of agglutination. It is an open question whether more importance should be attached to the loss of motion of the bacilli or to the clumping, some observers being of one opinion and others holding to the opposite belief. Young cultures, not over twenty-four hours old, should be used in the tests, though still younger (from six to eight hours old) had been used with good results in some cases. He prefers a middle course, and uses and recommends cultures fifteen hours old. As to the culture medium, it did not seem to matter very much whether agar or bouillon was used. The use of old cultures is, he thought, a distinct source of error. The degree of saturation of the test was another point which should receive considerable consideration. With a strong saturation the reaction is obtained more quickly, while with a weak saturation a time limit of about two hours should be allowed. It was his experience that the reaction was more marked in thermostat-cultures than in room-cultures. The degree of saturation recommended by Widal was 1 to 10 or 1 to 15, but later experiments had shown that dilutions of 1 to 40 or 1 to 50 gave better results. The criticism had been made that the colon bacillus gave the reaction in some cases as strongly as the typhoid bacillus, but where there was any doubt in the differential diagnosis of the two diseases the precaution should be taken of making the test with a weak dilution, as the colon bacillus had never been known to react with a dilution greater than 1 to 40. Another source of difficulty in some cases is the late appearance of the reaction. In the majority of cases it could be obtained in the first week, but undoubted cases of typhoid, confirmed by subsequent *post-mortems*, had failed to give positive reaction until the second or third week, and in a few cases the reaction had been absent altogether. The conclusion to be drawn from this was that a negative reaction was not conclusive evidence of the absence of typhoid. A third source of error was to be found in the fact that the blood of persons who had had typhoid fever retained the power of agglutination for a considerable time.

He suggested that the discussion might very profitably cover the question of the utility of dried-blood preparations as against fresh specimens. While the former method possessed many advantages as a more convenient method, it lacked the quantitative exactness of the latter procedure He thought it possible, however, that the method of examination with dried blood might

be so developed as to furnish a qualitative test.

In conclusion, he laid stress upon the importance of precision in the test, but at the same time he thought the method might be so simplified as to be available for the general practitioner, so that a fairly accurate test might be made at the bedside. For the more exact examinations completely equipped laboratories were necessary and should be at the disposal of the general practitioner, and the establishment of such laboratories by cities or States should be encouraged.

Some Relations of Author, Publisher, Editor and Profession.

Before the American Academy of Medicine, at its meeting in Philadelphia, Dr. Gould read a paper with the foregoing title, in which he presented arguments going to show that the contributions of medical men to medical journals were in the nature of a loan to the publishers of these journals and not a gift outright to be controlled indefinitely by the publisher. The copyright law was framed in reference to general literature, and the condition of affairs which now pertains in medicine was not foreseen.

The publishers should permit articles contributed to their journals, but only to be abstracted, but to be quoted, and the illustrations reproduced, in other reputable medical publications. The first dublisher finds sufficient profit in the fact of priority of publishing. Upon the author's part, the greatest circulation that can be given to his article, the more it is quoted, abstracted, or reproduced in a reputable manner, the better it is for him. In addition to the personal aspect it is also better for the profession, and for medical science and progress, because the profession has never admitted, but has always denied the right of any individual to the exclusive use of medical discoveries or advances, and, therefore, no publisher should have the right to control serial medical literature indefinitely, contributed, for the most part, without compensation.

Dr. Gould read several letters from eminent American physicians emphasizing this view, and spoke of the remarkable unanimity and self-respect with which the editors of American medical journals had reprobated any attempt to limit medical progress by any methods which should prevent the reproduction, classification, and spread of serial professional literature. "The publishing of serial literature is purely ancillary to our work, and must not be allowed to limit or monopolize it." Moreover, it was contended, there is a pardonable patriotism in which we may indulge; the publication of a good book is one of the best methods of raising the American medical profession in the opinion of our foreign confreres. Such books are the very best missionaries of international courtesy and good feeling that we can send out.

As to the matter of reproducing the illustrations, or quoting verbatim from books, the matter is entirely upon a different basis, because of the fact that the author is paid for his work and a great deal more money and labor das been invested in it, etc., but even here a large measure of courtesy and liberality was advised. When, however it comes to reprinting an entire book without the consent of the author or publisher, it becomes an outrage which no right feeling person would sanction. Dr. Gould read letters from English authors and publishers, showing that it has been the habit of some American firms to pirate large numbers of books owned by English authors and publishers, and absolutely without the permission of these owners. "Science is cosmopolitan; medicine is most patriotic when least selfish; we know naught of geographic limits or national boundary lines; our colleagues over sea are our brethren none the less because miles of water lie between us: he who steals the products of a man's brain is worse than he who robs him of the products of his handwork."

Lastly Dr. Gould condemned in the strongest terms the use of the review columns of medical journals for commercial purposes or to pay the private debts and enmities of the editor in charge. He alluded to many examples of such prostitution of the review columns, in which for example, it was impossible to get a just review or any review whatever of certain books published by a rival firm, or in which it was equally impossible to get anything but a eulogistic review of the most worthless book in the review columns of a medical journal owned by the same publisher as the one publishing the book.

In summarizing Dr. Gould said:

1. That publishers of medical journals be courteously requested to permit articles in their journals to be abstracted and quoted by reputable physicians, and that no impediment be placed in the way of other publishers whereby the widest dissemination of the medical knowledge contained in serial medical literature may be prevented.

2. That as illustrations are sometimes necessary to such dissemination of medical literature, electros of such illustrations either be furnished by the holder of the original electro at a uniform price of say $1.00 each,

or that permission be give to reproduce such electro at one's own expense.

3. That the books of foreign medical authors in default of international copyright law should not be reprinted in this country without the consent of the foreign author and publisher.

4. That the use of the review colums of a medical journal for commercial purposes by the publisher, or for paying the personal debts and revenges of the editor, is conduct unjust in a publisher and unprofessional in its editor.

Dyspepsia.

In a late issue of the New York Dietetic and Hygienic Gazette Dr. Jackson speaks pertinently of the inestimable value of systematic exercise; moderate indulgence in digestible, nourishing food; the free imbibition of pure water, and the interdiction of stimulants, sedatives and narcotics in effecting a cure. It is shown that the disease fastens itself most frequently upon those who are pent up in poorly ventillated offices; those who are engaged in mental efforts; those who undergo little physical, muscular effort; those who drink malt liquors before eating gorgeous meals and smoke strong cigars thereafter.

It is made clear that alcohol, nicotine and caffiene, when excessively used, hinder aeration and prevent decarbonization of the blood. All starchy foods are in the outset of treatment condemned for at least one fortnight. Peptonized milk, poached eggs, and tender boiled steaks are prescribed until the mucous glandular lining membrane of the stomach has sufficiently recovered its tonicity to put forth normal digestive juices. The blood *must* be aerated and the general system *must* be rebuilded by a process of extensive oxygenation. For this purpose it is recommended that the patient take a brisk dash of some form of exercise to last until a *free* perspiration comes out over the whole body for one half hour every day; that he drink copiously of *pure water*; that he eschew, religiously, the use of wine, beer, brandy, coffee and tobacco; that he cease taking purgatives and pepsin.

The Doctor enumerates the constituents of a mild chalk water which flows from a bed rock fountain showing eighteen grains of minerals to each gallon—principally composed of the carbonates. The water is further carbonated, as it flows fresh from the well, with one and one half cubic inches of dioxide gas per gallon. It certainly seems apparent that the dyspeptic, if other directions are followed, must derive great benefit from flushing his system plentifully with naturally carbonated chalk water. Water, next to air, is the great carrier of oxygen, and oxygen is the great purifier and rebuilder.

The Treatment of Typhoid Fever.

Dr. Upshur of Richmond, Va., read a paper with this title at the Philadelphia meeting of the American Medical Association. His ideas of cold water and alcohol in this fever, and the Woodbridge treatment are so much in harmony with the views we entertain that we are glad of our opportunity to redroduce a part of his excellent paper:

He thaught there was a vagueness of concedtion regarding the treatment of typhoid fever. After mentioning prophylaxis by disinfection of stools' attention to milk and water supply, etc., the author came to the treatment of a case, and placed sdecial emphasis upon perfect rest and quiet in a well ventilated room with all precautions against sdreading infection. The patient must not be left alone, lest in a state of melancholia he commit suicide. Cool water should be given to relieve thirst; the diet should be liquid, easy to digest, nutritious, milk being in general the best food. Implicit directions should be given as to time and quantity in the matter of feeding. No alcohol for young, vigorous subjects; a moderate amount for those accustomed to it. Mild cases required practically no treatment further than rest in bed and observance of the points already mentioned, and the use of enemata if necessary to keep the bowell open. For headache mention was made of cold compress, shutting out the light from the eyes, sodium bromide; for nervous symptoms, musk, valerian, ice cap for a short period. Salol might be indicated for intestinal hemorrhage, turpentine stupe over the abdomen, enemata or ice water, hypodermic of strychnine or ergot, reduced diet; for peritonitis, opium by the mouth. Attention must be paid to the bladder. Regarding abortive treatment, many claims had been made for this, even of a startling nature in the case of the Woodbridge method. Dr. Upshur had never tried it, not because he was prejudiced against it, but because on investigation he had concluded that it had not been supported by the results. He thought the originator of the method must have drawn erroneous conclusions from cases of mistaken diagnosis, having had no death in twelve years, yet having imposed no restriction upon diet or exercise, given no directions as to bathing. In fact, a cure must have taken place frequently before there was time for a diagnosis. The medicine was administered so often as to leave

no time for sleep. Was it strange, therefore, that physicians in the great hospitals had not indorsed or commended this treatment? The parasite was more resistant to antiseptic treatment than was the host.

The Treatment of Colles' Fracture.*

In 1814, Colles, of Dublin, published his observations on the fracture which to-day deservedly bears his name. Previous to that time, this injury practically masqueraded under the description of backward dislocation of the wrist, or forward dislocation of the lower end of the radius!—for such dislocations were considered common by the masters from Hippocrates down. The nearness of the fracture to the wrist-joint, the peculiarities of its anatomical surroundings, the absence of the characteristic sign of fracture unless specially sought for, and finally the teachings of the masters, all served to hinder the recognition of the actual occurrence in this injury—fracture. Therefore to Colles will ever be due our appreciation and gratitude for the correct diagnosis of this injury, as correct treatment in surgery is dependent npon right diagnosis, even to a greater degree than in medicine.

Since the recognition by Colles of the real nature of this injury, there has been a marked tendency till within recent years to overtreat it, with more or less baneful results. Sir Astley Copper advised that four or five weeks be let elapse before passive motion, in the aged, be attempted. He remarked that recovery is slow, it sometimes being 6 months before the finger motions were restored. Agnew, Bryant, Moullin, Walshe and McClelland all recognize that the stiffness of the wrist and fingers is due to fibrinous exudations around the tendon sheath about the seat of fracture. Bryant states that passive movement ought to be employed by the surgeon at an earlier period than he has been wont to; but he doesn't specify the time. Moullin advises passive movements of the fingers from the first day; and states that to prevent stiffness of the wrist he has begun gentle manipulations on the fourth and fifth days with excellent results. The writer believes that Moullin's instructions should become the general practice. He(the writer)in several cases, after reduction of the fracture, has moulded a piece of wood-fibre splint material over the dorsum of the forearm and hand in a semidrone position, the hand in line with the forearm. This bandaged over the parts, he finds sufficient protection for them. It does not interfere with passive motion of the fingers from the first, and is readily removed and reapplied to permit of passive motion to the wrist-joint. It is moulded directly over the skin, and requires no padding or compress. In these cases he has carefully caused passive motion of the wrist-joint from the fifth day and discarded the splint on an average of twenty-four days. It would appear to the writer that the treatment of "Colles' Fracture" could thus be formulated:

1st. Reduction, not always easy,

2d. Protection, by a simple retentive appliance, while reunition of the bone takes place.

3d. Passive motion of the fingers and thumb from the first day; of the wrist, carefully, from the fifth day.

*Abstract of a paper read before the Philadelphia meeting of the American Medical Associatioa, by E. A. Tracy.

Umbilical Sepsis in the New-Born.

Dr. Samuel W. Lambert, of New York, has given this subject special study in the Medical News. He says:

The pathology of the navel of the newborn child may be included in the one word "sepsis." The question is purely one of wound infection by one or more varieties of bacteria. The infection may be saprophytic and limited to the cord, or truly pathogenic, the germs invading the living tissue, or both forms of infection may exist at the same time. The lesions resulting from the infection of the umbilical ulcer are the same as occur in any wound. Any of the following forms of inflammation may result: Erysipelas, cellulitis, gangrene, lymphangitis, phlebitis, or arteritis.

The symptoms of umbilidal sepsis may be limited to the local evidence of inflammation, or to these may be added general symptoms of a systemic infection. The very fatal inflammations of the umbilical vein and of the hypogastric arteries give no positive local signs of their existence. The general symdtoms of septic infection are fevers, loss of weight, jaundice, skin eruptions, gastroenteric symdtoms, abscesses, thrombosis of the veins or arteries. In the series of cases which the author observed fever occurred in ninety-five cases, and granulations of the umbilicus have demanded treatment forty-seven times. Eighteen patients showed quite decided evidences of sepsis, and of these five died.

The fever of sepsis runs quite an irregular course, and is not a guide as to the severity of the infection. The pulse-rate and heart's action are of the greatest prognostic importance.

The relation of a moist granulating navel

wound to fever is shown by the following statistics: Of the forty-seven cases of granulating umbilicus fifteen patients had "initial fever," eight had a later rise of temperature, and ten had both forms. Only fourteen remained free from a rise of temperature. None of these patients suffered from the severer forms of icterus, which are apt to accompany the inflammations of the umbilical vein. The four autopsies made in these cases showed that the arteries rather than the vein had been attacked by the septic process. Jaundice is a very common symptom in the new-born child and has no diagnostic value in connection with septic infection, unless it develops to an extreme degree.

There is only one form of septic skin eruption met with, and it occurred in eight children born between July 17 and September 14. The eruption was like that of pemphigus, the bullæ containing blood-stained serum. Of these eight patients two died.

The proper dressing of the cord should consist of a gauze or linen covering for the stump applied without drying powder. The base of the cord should be surrounded by an occlusive dressing, but the cord itself should be exposed frequently to the air. A daily full bath should usually be omitted until after the navel is healed, and the umbilicus should be protected from all moisture, especially from the urin of the child. If the dressing on the cord becomes wet it should be changed at once. Of all the powders experimented with the stearate of zinc seems to be the best.

When a septic process has once begun its treatment is very unsatisfactory. Abscesses should be opened, the diet adapted to the condition of the child, and stimulants should be given freely.

The Abuse of Charity at Hospitals and Dispensaries.

The question as to who should be granted free medical attendance in our various charitable institutions, has become of grave importance especially as far as the general medical profession is concerned. With the many daily multiplying, so-called charitable institutions and Hospitals, something must be done by the projectors—who invariably are physicians—to gain patients and every method imaginable is resorted to to satisfy self agrandizement. Such institutions are certainly accomplishing much good be that granted, if charity is delt out to the truly poor and needy, but we have often seen this abused, shamefully by those who were able to pay large fees. The question is often asked, how is this possible? Some Congressman or especially some State Senator is sought after who is implored to lend his influence in behalf of such patients, and for fear that the state appropriation may not receive the support of the Senator, the medical or surgical staff admit any one sent there with his endorsement. Politics is allowed a too important factor in such affairs and it detracts from the truly deserving cause for which hospitals are usually established. A truly charitable institution comes to our minds, that of the Philadelphia Lying-In Charity, located in the City of Philadelphia. This institution receives no state appropriation, and it was one of the earliest to do charity work, and all those connected with the institution, do their work, merely for charity's sake, none are admitted there free, unless they really deserve it.

That these institutions have ruined many of our medical men cannot be doubted, if but an unbiased survey is made of the older practititioners. An old surgeon said but a few days ago:—"Not many years ago I frequently got amputations, and other minor surgical cases, but I have not amputated a limb or finger for a number of years, because if a person breaks a limb, or meets with any other kind of an accident requiring the attention of a doctor, they are at once picked up and carted off to the nearest Hospital in the Ambulances and they go there for sucsequent dressings of their wounds, all of course for nothing and in consequence I am deprived of a right and just fee."

There is more truth than poetry in this assertion and many of our surgeons, unless connected with some hospital will have to make the best of it and do no surgery. There would not be so much said, were such patients sent to an institution for the first dressing of their wounds, and subsequently sent to their regular physicians for further treatment, unless the institutions charged the usual fee for attendance. This of course must not be misconstrued as applying to the deserving poor as already stated.

Look over the annual appropriations by the various states to the alleged charity hospitals, and behold the thousands, yes millions of dollars given to them. Who is paying for this? Why each and every citizen is doing so indirectly.

Many institutions are filled with dummy patients on stated occasions, when the State Board of Charities Committee is about making their usual itinerancy, for the purpose of ascertaining which deserve the most and largest approporation, and the Committee

is in this way led to believe a great work is being done, when after their departure the beds are rid of their false patients and but a few ligitimate ones remain.

We have only this to add, that the establishing of so many so-called charitable institutions, their existance depending on State appropriations, will ere long cut itself short, as the drain on the various State treasuries cannot be withstood.—J. M. B.

The War Against Quinine.

In many of the smaller Journals is noticed a most unseemly war against this most serviceable drug. We are glad to note that this war is being conducted by men of only local fame, and we are led to believe that these gentlemen are only unskillful in the use of the remedy. "The unskilled workman, etc.," is here best demonstrated. Some of the positions assumed by the doctors leading the fight, are correct, but *no* scientific therapist ever used quinine in the manner condemned by them. A great deal of experience in the lowlands along the Mississippi river, has convinced me that if used as in formulæ added, it is truly a sheet anchor.

To the use of the drug in the doses mentioned, I am opposed, and can see only harm as a result. Large doses—over 10 grains—should *never* be given. In malarial fever and hæmaturia, quinine is not indicated, except in minute doses. When possible, in the ordinary chills and fever, use Formula No. 1. It should be supplemented with drachm doses of sodium phosphate two or three times daily.

If tinnitus be aggravated, and headache a prominent symptom, the bromide of quinine is the preferred agent. Irritable stomachs will often take the compound tincture of cinchona or calisaya, which frequently give surprising results. Or we may give a pill of quinine, iron and strychnine, and let the patient drink lemonade, or take a small dose of acid nitro-hydrochloric or dilute phosphoric. This makes a perfect solution in the stomach. This is specially useful with children, as they are all fond of a pleasant acid drink.

Now I feel convinced that if the gentlemen will only use the remedy skillfully it will never disappoint them.

To avert a chill, nothing is so good as half a cup of hot strong coffee, in which is squeezed a part of a lemon. Give every hour for two or three hours before the expected paroxysm, and it will be missed.

As to the other and various uses of the drug, it is not necessary to refer.

In the following formula, either the ac. sulph. arom., or ac. nitro-hydrochloric may be substituted for the phosphoric, and in a few rare cases ac. hydrobrom. dil. is indicated:

R	Strych. Sulph.....	gr. iss.
	Quin. Sulph.....	ʒii.
	Ac. Phosphor. Dil.....	ʒii.
	Spts. Frument.... ...a.q.	ʒviii.

M. et. ft. Solut.

Sig.—Teaspoonful 3 times daily, in a little water.—Ballard.

A Practical Journal.

Probably no medical journal in the world has had as steady and substantial growth as that evidenced by The Woman's Medical Journal of Toledo, O.

The June issue is a very fine number and contains a large amount of valuable information and finished articles.

Its table of contents includes the following

ORIGINAL ARTICLES:

Encysted Droysy of the Poritoneum, etc., by Claribel Cone, M.D., Baltimore, Md.

Malarial Fever, by Frances Cantrell, M. D., Evansville, Ind.

Pessary Worn Over Thirty Years, by Rose Willard, M.D., Chicago, Ill.

Translations, by Susanna Boyle, M.D., C. M.

The editorial staff is thoroughly representative, including the following:

E. M. Roys-Gavitt, M.D., Editor-in-Chief.

Claudia Q. Murphy, Managing Editor.

Margaret L. Hackedorn, Business Manager.

Department of Surgery—Marie S. Mergler, M.D., Woman's Medical College, Chicago, Ill.

Department of Gynecology. — Lillian Towslee, M.D., College of Physicians and Surgeons, Cleveland, O.

Department of Dietetics.—Frances Rutherford, M.D., U.B.A. Hospital, Grand Rapids, Mich.

Department of Paediatrics and Infant Feeding.—Edith A. H. Fyffe, M.D., Chicago Daily News Sanitarium, Chicago, Ill.

Associate Editors.—Mary J. Spink, M. D., Indianapolis, Ind.; Julia A. Carpenter, M.D., Laura Memorial College, Cincinnati, O.; Susanna Boyle, M.D., C.M., Woman's Medical College, Toronto, Ont.

Beginning with a limited number of pages this journal has steadily increased until now it is a monthly magazine of seventy pages, over forty of which are reading pages.

It is handsomely printed and most carefully and conveniently arranged.

Aseptic or Antiseptic?

Admitting for the sake of argument the advantage of the genuine aseptic method in surgery, it will be admitted that its imperfect imitation is cumbrous in detail, troublesome in execution, deceptive and dangerous in results. In one of our cities I recently witnessed an operation for necrosis of the tibia with sinuses. The operator and his host of assistants, excited and tumbling over one another competed in the cleansing ceremonies.

The nurse opens the sterilized gauze on the dinner table, and with unclean hands and the family scissors, needle and thread, industriously prepares, wipes, placing them carefully in water boiled the specified length of time.

The women running hither and thither in imminent danger, boiled enough water they said to scald a pig.

In this pandemonium the trembling victim, who for twenty years had without murmur, suffered untold pain, rather than submit himself or family to this ordeal, is unceremoniously requested to mount the table, and is surprised with a stab of the needle. For half an hour the patient lies perplexed and horrified. The leg and sinus are washed with antiseptic soap, but not shaved. The sterilized instruments are placed in boiled water and the new fledged assistant gravely speaks of his loss of faith in antiseptics! The operation is completed and a solution of bichloride (1–2,000) is prepared as a final swab, but I suggested pure carbolic, doubting the efficacy of all the elaborate nonsense.

It was packed with dry borated gauze and sprinkled with boracic acid and antifebrin, all unsterilized and no doubt reeking with the dreaded germs.

All this paraphenalia Lister has now discarded with the impression but likewise useless atomizer.

One surgeon, an anæsthetist, and one ounce of carbolic acid, might not perform so successful a comedy, but would meet with as great success.

Fred. Winnett, M. D.,
M. R. C. S. Eng., Toronto.

Rational Gynecology.

This was the title of a paper read by Dr. J. H. Kellogg, of Battle Creek, Mich., at the American Medical Association, June 3d, 1897. He briefly called attention to a class of conditions which does not attract the attention it deserves. He claimed that pelvic disease is not always purely local. The surgeons forget this, and often remove a hypersensitive ovary or perform a hysterectomy because the patient is suffering from general nervous exhaustion. From a study of his case-book he finds that 52 per cent. of the cases showed displacement of the abdominal viscera without associated displacement of the pelvic viscera, and only 6 per cent. showed the reverse condition. Visceral displacement in pelvic cases, therefore, is not a distinct pathologic entity, but is associated generally with displacement of the abdominal viscera as a primary cause. Rational gynecology, therefore, includes the treatment and restoration of the abdominal viscera as well. He believes that the backache and other symptoms are due to general visceral prolapse, and not merely to displacement of the pelvic organs. Retrodisplacement is favored by lack of obliquity of the pelvis.

Infantile Athletics.

Dr. H. L. Taylor read a paper with this title before the N. Y. Academy of Medicine. When one considered the muscular structure it became evident that man was not destined for a life of inactivity. The manner of obtaining an existence by ancient man, or man in the uncivilized state, necessitated much exercise, and at the present day we found ourselves with a physical system whose healthy function was not in harmony with rest. Growth itself implied exercise, and it was not without significance that fœtal movements began at least five months before birth, and the infant was ushered into the world with a cry. In waking hours its small limbs practised vigorous movements, an act superficially unimportant, but which was necessary to growth and power. Our purpose should be to encourage freedom of movement, but instead mothers swathed the baby in much fine linen and prepared the way for debility and sickness. What a contrast between the bringing up of the baby carried and lolted on the back of the African mother and that of the boby raised under the restrictions of city life! It has been observed that in cities infants showed much more vigor at birth than they did a year or two later.

Dr. Taylor advocated short dresses at an early period, so that the little one could kick freely, two air-baths daily, with play and romping, and rubbing or washing and rubbing of the surface. The feet were better off without shoes or even stockings. The natural tendency to play should be encouraged in children, and long tasks should not be imposed upon them, as they tire much easier than grown people under work. The

baby must not be encouraged to walk too soon before sufficient physical development had taken place, lest injury result.

The Free Treatment of Hospitals.

Recently, while visiting a large northern city, containing many hospitals and dispensaries; our attention was attracted by the great number of people, who came to receive free treatment. Many of these people were amply able to pay for the services of a physician at their homes.

A little investigation showed us that the entire population of the city, on an average, gave one physician to about five hundred people. Further inquiry revealed the fact that thirty-seven "per cent" of the city's population were receiving free treatment in those institutions, and that the number thus treated is rapidly growing. Physicians connected with these free dispensaries actually exert themselves to swell the statistics of attendance.

There is a constant struggle among the physicians to secure appointment on the hospital staff, and without such a position it is becoming very difficult to build up a practice.

Again, *private* hospitals, with a "paid" staff, are springing up all over the land, and if reports are true, the dividends from these institutions will repay the investments.

Much to our astonishment, we were shown a circular, which had been sent out from one of the large *public* hospitals offering to treat patients, at their homes, free of charge on condition that they pay, during sickness and health, fifty cents a week into the hospital treasury.

Another *public* hospital informed the people through the daily papers; that physcians would be sent from the hospital to treat cases, free in thier homes.

We are not pessimistic, but such facts force upon us the conviction that the general practitioner is suffering very greatly in his work, from the strong competition of the hospitals. It would be interesting, did scope permit to examine into the causes which attract such numbers of patients to the hospitals, not only of the above mentioned city, but also to the hospitals in other centers of population.

The physician is now face to face with this condition and right or wrong he must meet it. If the policy of extending free treatment to all of the people is right, what is to become of the practitioner? If it is wrong, what is the remedy? Certainly, this is a matter of great importance to the entire medical fraternity.—J. B. S.

The Value of Quinine as an Oxytocic.

At a recent meeting of the Philadelphia Obstetrical Society Dr. H. A. Hare made a report concerning a collective investigation which he had carried out among a considerable number of prominent obstetricians as to the actual value of quinine as an oxytocic. It was evident from this report that the drug has no direct influence upon the uterus, but greatly increases its power of contraction by supporting the nervous system and supporting the general strength of the patient. It was shown that the drug is incapable of originating uterine contractions and various explanations of the fact that abortions have occurred while quinine was administered were presented. The conclusions reached from the replies of the various obstetricians to whom the questions had been directed indicated that quinine was by no means as populor a remedy for uterine inertia as it was some years ago. One or two observers reported not only that the patients were annoyed by the ordinary symptoms of chinchonism but, in addition, that in their opinion quinine distinctly increased the tendency to post-partum hæmorrhage. A nnmber of cases from literature were cited, seeming to support this view.

Finally, the results of the report indicated that the drug should be given in full doses in such a form as to be quickly absorbed.

The Passing of the Pharmacist.

Time was when every pharmacist understood how to make all tinctures, elixirs, unguents, emulsions, plasters, pills, &c., but the great manufacturing establishments in this country and abroad have changed all this.

The apprentice to the pharmacist, like the buffalo, is rapidly disappearing, as any cheap girl or boy can sell soda water, candy, tooth brushes, Killum's golden discovery, a foot of fly-blister, a bottle of pepsine, sugar coated pills by the dozen, ready-filled capsules, bottles of anti-malaria, anti-fat, anti-lean, anti-rheumatic remedies. There no longer exists any reason why all groceries and saloons should not hold a license to sell all this *anti-Doctors'* stuff, for the so-called drug store as conducted now in most of our large cities, do but little compounding and are really retailers of manufactured articles, ready-made and on the misfit pattern at that! They do the physicians incalculable harm by counter prescribing, or rather retailing over the counter. concoctions alleged to cure anything a man may claim to have.

Physicians will be driven to dispensing their own medicines, or else banding together and establishing in every quarter of the city, small pharmacies devoted exclusively to legitimate business, where no patent medicines, candies, soaps, soda water, school books, &c., &c., will be allowed, but where an educated pharmacist will always be on hand to fill physicians' prescriptions. Imagine a pharmacist filling a prescription calling for an accurate distribution in thirty pills of a grain each, of strychnine and arsenic, being interrupted four or five times by purchasers of gum, cigarettes, soda water and candy. And yet, this happens every day in every drug store in many cities. The papers often contain accounts of the lamentable mistake of the pharmacist when the coroner is called in; but no one is the wiser if no fatality happen.

The time has come when this must stop, and it behooves us to use our influence to hasten the day when the "shoe-maker shall stick to his last." T. S. Dabney.

The Effects of Syphilis in the Upper Air Passages, and their Local Manifestations.

Fink (The Journal of Laryngology) says: In some of the old writings, descriptions are found of throat affections which might be regarded as syphilitic, but even the physicians of the middle ages had no idea that an etiological relation could exist between disease in the throat and that of a distant organ. The first case in which an effection of the upper air tract was recognized as a manifestation of general syphilis was that of a bishop in Posen, who died in 1382. It is related that he led a very dissolute life, and that in consequence he suffered from ulcerations of the tongue and throat, which rendered him almost unable to speak or swallow before his death.

At the end of the fifteenth century, when malignant syphilis raged throughout Europe the connection between the exceedingly rapid destruction in the throat and corresdonding changes in the genitals was so apparent as to force itself on the general attention. We find, consequently, after each outbreak of the *morbus gallicus* very correct estimates—both medical and lay—of syhilitic affections of the nose and throat.

Of laryngeal syphilis, on the other hand, all the writings from the fifteenth to the eighteenth century consulted by the author give only a very hazy conception. Morgagni was the first (1778) to describe syphilis of the larynx; his reports were based entirely on *post-mortem* examinations.

An accurate knowledge of syphilis of the upper air passages has been obtainable only since the introduction of laryngoscopy and rhinoscopy.

From the historical introduction the author passes to the consideration of the three stages of syphilis as manifested in the nose, pharynx, and larynx. The descriptions are full and interesting, but contain nothing especially new. There is a useful section on pareses of the vocal cords of syphilitic origin. Some rare cases observed by himself, including one of chancre of the tonsil, are reported. The author considers that a perforation of the palate does not always point positively to a syphilitic affection, and relates the case of a young woman who had suffered for many years from "a multiple caries of the nasal skeleton," and in whose palate a perforation formed while under his observation. Syphilis could be excluded with certainty, and specific treatment failed.

In differentiating chancre in the nose from a tubercular ulcer the author states that the latter occurs only in those with pulmonary tuberculosis, and that the presence of tubercle bacilli prevents confusion. This is not the case; tuberculosis is frequently present in the nose without any discoverable sign of it elsewhere, and the finding of the bacilli is often a matter of extreme difficulty.

Some Resources in the Diagnosis of Nervous Diseases.

Dr. Cagney (Harveian Meical Society) read a paper on Some Resources in the Diagnosis of Nervous Diseases, illustrating it by a series of clinical cases of peripheral nervous disorders. These he investigated before the society and took occasion to demonstrate practically the use of electric currents in diagnosis. He dwelt upon the importance of this one element of certainty amongst what is so often complex and ambiguous, and defined the limits within which the result obtained by noting the electrical reactions of muscles was absolutely to be depended upon. Amongst the cases which he exhibited was a middle-aged woman, the subject of alcoholic neutritis, showing at the same time general muscular tenderness with total analgesia of the skin all over the body, this and other symptoms being obviously hysterical; and he also related the history of other cases within his experience urging the necessity of a departure from the usual mental attitude, by which it was assumed that if a patient was hysterical therefore he was not the subject of organic disease, the fact being in his opinion that the unstable nervous system of the hysterical

was more likely than another to suffer from coarser lesions. The discrimination of the two elements, the functional and the organic, occurring in the same person seemed to him to be a task of the first importance—a task which could not be satisfactorily performed without a knowledge of the electrical reactions. *Apropos* of certain cases of anterior poliomyelitis, he called attention to clinical appearances tending to modify the usual conception regarding the pathology of these affections.

Aerial Therapy.

Whether Sanatoriums and health resorts for consumptives are a danger to other inhabitants of the neighborhood, is a subject that has attracted considerable attention during the past few years. We clip the following from "The Hospital," of London:

S. A. Knopf, of New York, has devoted considerable attention, and his recent contribution on the subject is of practical moment, tending to prove that the vicinity of a properly conducted sanatorium for consumptives is absolutely harmless. The author refers to the fact that the most important factors in imparting the disease are the expectoration, the saliva, and other secretions, and points out that in a properly conducted sanatorium patients never expectorate except in a receptacle provided for the purpose—a spittoon or a pocket flask. Those in bed and too weak to make use of the spittoon are provided with moist rags, which are burned immediately after use. The expectoration and other secretions are destroyed before they have a chance to dry and do harm. Napkins and table utensils are boiled or disinfected after each meal. Besides this, a scrupulous cleanliness is observed in all rooms, and the furniture is so arranged that a thorough disinfection may be easily carried out. Knopf further states that repeated microscopical and bacteriological examinations of the dust taken from the rooms of such sanatoriums have proved it to be practically free from bacilli. At Saranac Lake, the great American Sanatorium, none of the 20 to 25 attendants have ever developed tuberculosis. The contraction of the disease by physicians, nurses, or employees is almost unknown in these institutions.

But the effect of such sanatoriums upon their surroundings is not a matter of conjecture or of opinion. Knopf brings experience and statistics to our help. In Goerbersdorf, the largest and oldest sanatorium for consumptives in the world, through which some 2,000 patients pass every year, the mortality from tuberculosis among the people of the neighboring village has decreased in a wonderful degree since the establishment of the institution. Not only has the sanatorium done no harm to the surrounding population, but it has done good, through the example set before the village people by the patients and the sanitary regulations, which direct all attention to the destruction of the bacillus.

Diagnosis of Cerebral Abscess.

Eskridge (Americ of Medical Science) in concluding an elaborate paper on the diagnosis of chronic abscess of the brain, states that although in many cases an absolute diagnosis is impossible, this is not to deter the surgeon from giving the patient the chance which an operation promises. "The physician who has not the courage to recomend an exploratory operation in a strongly probable case of abscess of the brain lest he may be wrong in his diagnosis, is more solicitous for his own reputation than for the welfare of his patient." A careful study of each individual symptom and of the apparant etiological factors in any case is most important, although these are sometimes misleading. In one case reported by Eskridge, chronic otorrhœa, a blow to the head and suppuration in a distal part of the body were noted, and yet the patient died of cyst and tumour of the brain. In another, arterial thrombosis was strongly suggested by the symptoms, yet the patient died of intracranial suppuration. In another the symptoms and apparent etiology pointed to tuberculous meningitis, although the actual condition was suppuration. The differential diagnosis of chronic brain abscess is from tuberculous meningitis, cerebral softening, hæmorrhage, and tumour: (1) In tuberculous meningitis the majority of cases run their course in a few weeks; there is fever, and symptoms of involvement of cranial nerves are usually present. Unfortunately these symptoms vary greatly. (2(Cerebral softening and focal encephalitis is not often a source of difficulty in diagnosis, but Eskridge, and also Murri, have both met with cases. The writer can give no points of definite value in the differential diagnosis.]3) Cerebral hæmorrhage, coming on suddenly and bursting into the ventricles in one case of the author's, was mistaken for an abscess rupturing in the ventricle, but this must be rare. (4) Tumour. This is, perhaps, the most difficult diagnosis of all. The history of a possible cause and the existence of fever point to abscess, but not certainly, because sub-normal temperature is very com-

mon, and injuries and middle-ear suppurations often occur in the presence of tumours. The degree of optic neuritis present in relation to the existence of the disease may aid one. A steady, but gradual, increase of symptoms of organic disease of the brain, with the development of one nerve root symptom after another, is in favour of tumour, so are prolonged intervals during which the symptoms make but little progress.

Treatment of Eclampsia.

Dr. Carpenter in Annals of Gyn. and Ped. submits the following as the conclusions of his investigation of the subject: 1. Every pregnant woman with albumin in her urine being exposed to attacks of eclampsia, the milk diet giving splendid results against the albuminuria, and in particular that met with in pregnancy, the urine of pregnant women should be examined with the greatest care, and, if albumin is found, no matter how small it may be in quantity, an absolute and exclusive milk diet should be instituted. This is the preventive treatment *par excellence* of eclampsia. In cases in which œdema is present without albuminuria, it is well, if not an absolute necessity, to prescribe the milk diet. 2. Every time we find ourselves in presence of an eclampsia, begin, if the patient is strong and vigorous and if cyanosis is present, by a bleeding of from two hundred to three hundred grams, and then give chloral; give milk by the mouth and, if necessary, through a sound. 3. Combat the attacks themselves by inhalations of chloroform and favor diuresis by subcutaneous injections of artificial serum. 4. If the woman is delicate, the cyanosis is not very marked, the attacks are not very frequent, chloral should alone be given. 5. Wait until the labor occurs spontaneously and allow it to end without intervention whenever this is posible. 6. If labor comes on spontaneously, but does not end, because the uterine contractions are too feeble or too slow, end the labor by the application of the forceps or a version, followed by extraction, if the child is living, or by a cephalotripsy, basiatripsy, or cranioclasy, if the child is dead. 7. Before an intervention wait until there is complete dilatation, or at least a dilatability of the cervix, in order that the operation may be done without violence, and consequently without danger for the mother. 8. Reserve induced labor for a few exceptional cases. 9. Reject, absolutely reject the Cæsearean operation and *accouchement force* as current methods in the treatment of eclampsia.

Operative Treatment of Urinary Fistula in the Female.

The Medical Record says that Dr. S. Broido bases the method that he advocates on the two following principles: 1. That the amount of tissue at the site of the fistula is the same after operation as before. 2. That the denuded surfaces are approximated without undue tension upon the edges, and that they are identical anatomically. The method is as follows: The vaginal tissue is elevated at one point with a tenaculum and denuded transversely. Starting at the lower border of the incision, the mucous mmbrane should be separated along the entire length of the vesico-vaginal septum; the same should be done at the upper border of the incision. Sometimes it is better to construct the upper portion with the aid of a second incision perpendicular to the first, forming two triangular areas with the superior border of the fistula to the division of the spetum, These areas should be sutured longitudinally. It is occasionally preferable to form a single quadrilateral denudation superiorly by two assending incisions which pass transersely. In cases complieated by prolapse of the bladder if there is difficulty in bringing the edges of the fistula together, it is well to take advantage of the laxness of the bladder walls and to separate the vesical tissue around the edges of the fistulous tract. The sutures are divided into two groups: the vesical, which should be of catgut because they are deep; and the vaginal, which should be of silk because they are more superficial. After the sutures are tried, the bladder should be filled with some fluid, and if any leak is detected more sutures should be put in. The patient is not to be catheterized after the operation.

The Practical Bearing of Washing Out the Stomach in Infants.

Leo, according to one of our exchanges says that washing out the stomach in infants is a perfectly rational method of treatment and deserves to be more frequently employed. It is exceedingly simple and is performed exactly as in the adult. A common soft stomach tube of five millimeters diameter inside is used, to the upper end of which is attached a rubber tube about one meter long with a funnel. The tube is to be passed while the child sits in its mother's lap, and the washing is at once proceeded with, and continued until the water returns clear. Simple warm water may be used for this purpose. If intestinal symptoms predominate we may add a few cubic centi-

meters of an alcoholic solution of thymol, and where atony of the stomach is marked the addition of table salt is to be recommended.

The indications for stomach washing are: the acute dyspeptic conditions, under which term is grouped simple acute dyspepsia, acute gastritis and gastro-enteritis. Not infrequently a single washing accomlpishes the cessation of vomiting and diarrhea, even where they have existed for several days. If one washing has not the desired effect it is to be repeated once or twice on the following day. The vomiting is most markedly influenced by the operation; besides this, the appetite and general condition improves promptly. Should the diarrhea still continue it is to be treated by diet and internal medication. In typical cholera infantum favorable results from the washings were in most cases not obtained, though in some subacute and even chronic conditions very good results were noted.

Cases of temporary dilation and great accumulations of gas are usually accompanied by disturbance of the appetite, frequently by vomiting, poor nutrition, and anomalies of defecation. The cause of this condition is generally an atony of the walls of the stomach, frequently accompanied by anomalies of its contents. In such cases a repetition of the washings may be necessary; at the same time dietetic, roborant, and other judicious treatment must be combined with it.

Examination of Blood as an Aid to Prognosis in Diphtheria.

G. S. Engel believes that a microscopic examination of the blood will enable us to make a more intelligent diagnosis in diphtheria. He says:

If the myelocytes—*i. e.*, mono-nuclear white blood corpuscles, with neutrophile granules (excluding both the mono-nuclear leucocytes poor in chromatin, considered by Frankel as characteristic of leukæmia, and also the large mono-nuclear eosinophil cells of Muller and Rieder)—are present in quantities of two per cent. or more in the blood of a diphtheria patient, the patient will die; but a smaller percentage does not of itself justify a favorable prognosis. The highest percentages found in diphtheria patients who recovered were 1·5 per cent., 1·4 per cent., and 1·3 per cent., and these were present only at the height of the illness, sinking back very shortly to 0.7 per cent., 0·1 per cent., and 0 per cent. respectively.

The maximum of myelocytes found in the blood of those who died of diphtheria was 16·4 per cent. On the other hand, eight cases died without any noticeable increase in the quantity of myelocytes. The author cannot yet state at what day of the illness a bad prognosis may be made, but in one case in which he was able to examine the blood on the fourth day he found 12·8 per cent. myelocytes. The first case died seven days later; the second, eighteen days later.

Interesting observations are recorded with regard to the numbers of other white cells, eosinophil cells,etc; but apparently no very definite conclusions can be formed with regard to them.

Chronic Gastritis.

Prof. H. T. Webster, M. D., of San Francisco, in a recent publication (New England Medical Monthly) discusses chronic gastritis and its treatment. After a careful *resume* of the etiology and pathology of the affection, and an enumeration of the symptoms attending it, he says, in speaking of the diagnosis:

"The use of the stomach-tube will afford the best means of diagnosis. If siphonage be practiced an hour or so after eating, hydrochloric acid will usually be absent, and lactic acid, associated with fatty acids are present with a large quantity of mucus. If siphonage be practiced seven hours after eating, undigested food will be found still remaining in the stomach, while in cases of functional dyspepsia it will have disappeared, Malignant disease will be excluded by lack of cachexia, absence of perceptible tumor upon palpation, and by the character of the material vomited, coffee ground material soon appearing in cancer. In gastric ulcer, a diagnostic feature is frequent hematemesis."

He believes that if a proper diet be pursued and rational medicinal treatment be employed, almost every case of chronic gastritis will improve readily, unless it be complicated by gastric carcinoma, gastric ulcer, or hepatic, renal, or pulmonary disease. His treatment consists in lavage, disinfection and cleansing of the viscus with hydrozone. Lavage should be practiced every morning before eating, a small quantity of water (a pint) being used at first, which should be increased to two or three quarts as the treatment is carried on. The water should be warm (98.6 deg. F.) and solutions containing Glauber's salt. asepsin or boracic acid are often useful. Regarding the use of hydrozone in this affection, he says:

"The introduction of hydrozone as a remedy in this condition was an innovation of remarkably value. A drachm of Mar-

chand's hydrozone, added to four ounces of boiled water, and drunk while the stomach is empty exerts a powerful influence in dissolving and removing the tenacious mucus, destroying microbic elements of fermentation and stimulating normal action in the diseased mucous surface. The best results follow its use in the morning before breakfast, the patient taking it while in bed, and remaining on the left side for ten minutes before rising. It may suffice, and it is advantageously used in this manner after the practice of lavage.

The hydrozone may at first produce acid sensations in the stomach, but as the irritated gastric surface improves in tone under its influence, this will pass away and sensitiveness to its action will subside. Where necessary the amount of hydrozone may be reduced until the stomach becomes more tolerant to it.

The important step in chronic gastric catarrh, as in catarrh of all other mucous cavities, is the cleansing of the part from the ropy mucus, which clogs the grandular organs, and serves as a nidus for the operation of agents of fermentation. Glycozone in teaspoonful doses, diluted with water, administered after meals prevents fermentation of food and accelerates a cure.

If the treatment outlined above be properly carried out, the writer believes that little more is necessary, for with the removal of morbid accumulations the gastric secretions will become normal in quantity and quality. Hydrochloric acid, administered internally, may in some cases do good, as also the bitter tonics, but their place is secondary to the use of the stomach tube and the disinfection of the mucous membrane of the stomach with hydrozone.

Too Much Major Operating in Gynecology.

The Boston Medical and Surgical Journal of April 1st, 1897 has a very timely Editoral on the subject.

In these days when the medical profession is devoting so much attention to the major operations on the female pelvic organs, operations looking to the removal of the uterus, ovaries or tubes, or to their fixation in more or less abnormal positions in the body, it is not amiss, in the interests of conservatism at least, that we should pause a little and emphasize certain fundamental principles of gynecology—such as making a careful investigation in every case of the particular points in which the pelvic structures differ from the normal, and then endeavoring to restore them as far as possible to that normal condition.

The medical journals are full of the descriptions of new operations, a vast majority of which have for their object either the removal of organs or an improvement on Nature's handiwork. Operators wish to "build up a perineum," or to stitch the uterus to the abdominal wall or to the bladder. It does not seem to occur to the ingenious originators of these procedures that they are undertaking a large contract in trying to improve on Nature. Instead of taking a receptive and scientific attitude and trying to search out Nature's methods, they assume knowledge and declare that they can do better.

When a prominent operator advocates "slipping out" a uterus because it is subinvoluted and the seat of endometritis, and another operator is in favor of amputating the cervix as a routine procedure instead of performing trachelorrhaphy, it may be that these practitioners are doing the best that can be done for their patients under the circumstances; at all events it is fair to assume that they think they are doing so. But a large body of the profession will always query, "Why should a woman lose her uterus or have her cervix cut off, with all that these mutilations imply, because the operator finds it easier to remove structures than he does to take the time and trouble necessary for the proper understanding of the more tedious and less brilliant methods of repair?"

When tyros in the art of diagnosis, emboldened by the lessened mortality of the present aseptic technique, rush into major operating the interests of the patient suffer. Many of the hospital operators and teachers help these tyros to a knowledge of the steps of certain operative procedures only to find these same men coming back to them after a longer or shorter period and saying: "Doctor, I know how to do such and such an operation, but I can't tell in what cases it is indicated, and my results have been bad." How much more rational to begin at the beginning!

We believe that the diagnostic skill of the average practitioner in this department of medicine is constantly improving; but to be convinced that there is room for still further improvement the doubter has only to follow for a short time one of the out-patient clinics of a metropolitan hospital and hear there from the patients some of the diagnosis made and treatment advised by a large number of practitioners, all of whom probably are not always incorrectly reported. We are credibly informed that, even now in this enlightened age, a considerable number of patients presenting themselves at our hospital clinics for treatment for injuries

of the pelvic organs due to child-bearing tell the old story that their doctors did not examine them after the puerperium. In other words, their medical attendants are pursuing the old policy of trusting to luck, perhaps fearing censure for injuries discovered, but more likely too busy to do their work thoroughly.

Early recognition of bad tears of the cervix and of the pelvic floor, inflammatory affections of the endometrium and tubes and ovaries, dislocations of the uterus and ovaries that do not right themselves in a reasonable time, if discovered and treated promptly not only do away with the need of many opeartions but will prevent a large number of patients from becoming debilitated and neurasthenic—conditions of body and mind from which operations alone, be they ever so successful, will not lift them.

We should welcome a return of gynecology to its older and more natural channels. The profession at large, dazzled for the time by the brilliant feats of abdominal surgery, should not forget that gynecology is something besides abdominal surgery; and the general practitioner should be ready to follow the specialist, prepared to investigate and treat the diseases of the female pelvic organs according to well-formed principles of the art.

Nature's Cure for Skin Diseases.

It will be gratifying to our many readers who have been prescribing Pineoline for the past four years to know that the size of the package has been increased from two to four ounces, the price remaining the same as formerly. This change was brought about through the President of the Walker Pharmacal Co., St. Louis, Mo., who has recently returned from abroad, entering into negotiations with their European agents, whereby the ethereal extracts of Pinus Pumilio will be imported in larger quantities. This extensive purchase resulted in their procuring the extracts at a somewhat lower rate than heretofore. The medical profession is thus given the advantage of the reduction, and it will no doubt be an incentive for them to prescribe it more freely in their practice. Being no secret preparationl its merits have been attested and confirmed by thousands of physicians throughout the world, in all forms of skin diseases. Pineoline is prepared from the ethereal extracts of Pinus Pumilio incorporated in Lanoline and White Petrolatum. This shrub grows only on a high altitude in the Black Forests of Germrny; the natives extract the oil, calling it "Krumholz-oel," or oil of the pine shrub, Pinus Pumilio. This oil is the remedial agent of Pineoline. Unlike many other local applications in skin diseases, this preparation does not suppress the eruption, but aids nature in throwing off the exfoliations and quickly restoring the tissues to a normal healthy state. It is, however, equally efficient whether applied in the initial inflammatory stage or in the stage of desquamation. It is a clean ointment, of a beautiful, creamy color, and during the process of manufacture the delightful, pleasant odor of the pine is retained. If you have not already used Pineoline, write to the manufacturers at once, who will gladly mail you an ounce jar free, together with literature on the subject,

Pineoline in the future will be dispensed in four-once jars only, and can be obtsined at all drug stores at $1.00 per jar, $9.00 per dozen.

Detection of Stone in the Kidney.

Dr. Edward Martin,of Philadelphia, read a paper with this title at the American Association of Genito-Urinary Surgeons, May 5, 1897.

He stated that in making a diagnosis of kidney calculus, the following points should be considered:

1. Family history. Torres has shown that heredity was traceable in two per cent. of cases.

2. Age and environment. The children of the needy are prone to calculi. A damp changeable climate seems to predispose to their formation, though for diagnostic purposes the fact that many people of a given locality have been affected with stone is of much greater importance than a theoretically unfavorable climatological condition.

3. Traumatism. A history of trauma to the kidney region, particularly if immediately followed by hematuria, and a short or long period of latency of symptoms precedes kidney stone in a considerable number of cases.

4. Diathesis. Lithemia and oxalemia, either actively existent in the patient or as a part of his inheritance, has a bearing on the likelihood of stone formation.

5. Kidney lesions, whether obstructive or otherwise, predispose to stone formation.

6. Mucus. Harrison has called attention to the fact that even in the very early stages of kidney stone there is often, especially in young persons, an otherwise inexplicable abundance of mucus.

7. Blood. Slight transitory hematuria is one of the earliest and most constant signs. The amount of blood is increased by jolting,

walking, muscular efforts, or renal palpatation. There are rarely clots or bright red blood. Blood cylinders, i. e,, casts of the ureters or of the tubules, made up of blood cells, are frequently found. The red blood corpuscles are often diprived of their hemoglobin (shadow cells) and show fragmentation. This must be differentiated from crenation, which is not suggestive of the source of hemorrhage. Rayer holds that the blood of kidney stone is most abundant after meals.

8. Crystalline deposits. A large excess of uric acid or urates, oxalates, phosphates, and carbonates, suggests not only the presence of stone, but its nature. The passage of sand or of small concrements is of great diagnostic value.

9. Pus. Pus ultimately develops in most cases of troublesome renal calculi. It is much more common in the early stages of renal tuberculosis than it is in the early history of stone. Blood is also a characteristic of tuberculosis; hence, it may be important to determine whether pus coexists with blood. A large excess of white corpuscles points to coexisting pyuria, thus suggesting tuberculosis rather than stone.

10. Epithelium. The detection of renal cylinders and casts is of course characteristic of kidney irritation. A large abundance of isolated transitional or flat epithelium cells suggests vesical irritation; beyond this, examination of single cells is of little help.

11. Albumen. Probably in the majority of cases in which the stone gives rise to distinct symptoms there is slight albuminuria. To determine whether or not this albuminuria is dependent upon the coexistence of the usual hematuria careful computation and comparison of the amount of albumen and blood present are necessary.

12, Alterations in the quantity and specific gravity of the urine are common. Polyuria is sometimes constant, often intermittent following an attack of renal colic. Exceptionally, anuria develops with colic,possibly reflex, usually due to the fact that both kidneys are affected,

13. Pain is one of the most constant symptoms of kidney calculus. It may be fixed pain, strictly localized to an area the size of a child's palm and is generally referred to the lumbar region. It is usually aching in character and is made worse by jolting,motion, or direct pressure. It must be acknowledged, however, that pain, though one of the most constant symptoms, is also one of the most misleading, since many renal conditions may produce this symptom with all the characteristics which have so long been regarded as typical of kidney stone. Moreover, it is probable that in nearly fifty per cent. of all cases of kidney calculus the pain is either atypical or is not sufficiently severe to attract the patient's attention.

14. Deep palpation of the kidney region easily elicits distinct tenderness. Excepting in the early stages of stone formation this tenderness is well marked. Dr. Martin said he regarded this as one of the most constant and reliable symptoms. As in the case of pain, it is sometimes referred to the healthy side.

15. Tumor, An appriciable tumor is usually found only after pyonephrosis has developed and multiple calculi of large size are formed.

16. Gastro-intestinal disturbance. This may be either reflex or due to imperfect elimination on the part of the crippled kidneys.

17. Reflex disturbances of the lower urinary tract, such as retention, dysuria, frequent or painful urination, are probably less symptomatic of calculus than of other renal conditions, excepting during and immediately following an acute attack of colic.

18, Palpation. With improved technic palpation of the kidney has become more practicable. The speaker said that in his own experience, however, he has been unable to make out the kidney in a large percentage of cases: the method is likely to be serviceable only in those patients with relaxed abdominal walls and with large calculi.

19. Ureteral examination. This is likely to be chiefly serviceable in deciding which kidney is affected, and if but one is involved, the condiiion of the other.

20. X-rays. This promises to become our most valuable means of diagnosing (*a*) latent cases of calculus; (*b*) those with the regular symptoms; (*c*) to distinguish between renal stone and such conditions as tuberculosis, acute congestion, Bright's disease, nephralgia, and kidney abnormalities, giving rise to symptoms identical with stone.

Of the symptoms and signs above enumerated, Dr. Martin said he should place in the order of value:

1. X-ray photographs; of these several should be taken with the light placed somewhat differently, before their negative evidence is accepted.

2. The passage of gravel or small concrements, associated with renal hematuria,fixed pain, and colic.

5. Renal hematuria, aggravated by exercise markedly relieved by rest,remaining long associated with pyuria.

The Operative Treatment of Cancer of the Rectum.

Taylor, in the Annals of Surgery, summarizes as follows his contribution to this special branch of surgery:

1. Great care should be exercised in the selection of cases for operation. Cancers which have exceeded the limits of the bowel and have acquired adhesions to neighboring parts had better be left alone.

2. The preparatory treatment deserves our utmost attention, having as its object the improvement of the patient's general condition, and as great a degree of intestinal asepsis as it is possible to obtain.

3. Free purgation, intestinal antiseptics, and rectal irrigation cannot have a really useful effect so long as there exists an ulcerating cancerous surface swarming with virulent micro-organisms. The use of the curette whenever possible, followed by irrigation, should accompany the other measures.

4. A preliminary colotomy can scarcely be recommended as a matter of routine. It appears to be chiefly indicated when attempts to empty the intestine and cleanse it have either been impossible or attended with difficulty.

5. We should consider a certain number of types of rectal cancer, both as regards their site and extent, with a view to determining the methods best suited for their removal.

6. Three cardinal rules are suggested as applicable to all cases: (1) Control bleeding as much as possible. (2) Let the principles of aseptic surgery be as strictly observed as the field of operation will admit. (3) Avoid rough manipulations in the separation of the diesase; let it be effected for the most part by a process of careful dissection.

7. The perineal operation is best employed for ano-rectal cancers—that is, for cancers which involve the sphincteric zone and extend for some distance above it.

8. If possible, the rectum should not be split in its removal nor should the finger be introduced to serve as a guide in its separation. Elastic ligatures should be applied and sterilized gauze placed beneath before it is cut.

9. Cancers situated in the supraspincteric region had better be removed by the sacral method. As contrasted with the perineal, it gives more room, bleeding is more easily controlled, separation of the disease is more readily effected, and it gives the best functional results.

10. Temporary sacral resection should not be entirely disregarded, owing to its manifest advantages over the more extensive mutilation of Kraske and Bardenheur.

11. If, when the cancer is excised, it is found that the upper healthy segment descends easily, an attempt to suture it to the anal margin is worth making, having previously removed the mucous membrane from the lower segment.

12. In cases where the ends of the bowel have been united after removal of the cancerous segment, it is well not to close the sacral wound completely for fear of accidents.

13. For cancers situated high up, as well as for those of wide extent in the rectum, the formation of a sacral anus is often the only means at our disposal.

14. In such cases it appears wise to follow the advice of Gersuny, and give the bowel a twist on its long axis before attaching it to the skin, the object being to establish a modified sphincteric apparatus.

15. The perineo-abdominal and sacro-abdominal operations are grave; they involve serious risks, and can only be required in very exceptional cases. However, we must encourage attempts which help to extend more widely the indications for complete removal of the disease, and such as are suitable for those desperate cases in which the palliative treatment afforded by an artificial anus has hitherto been our only resource.

Mississippi Valley Medical Association.

The next meeting of the Mississippi Valley Medical Association will be held in Louisville on Oct. 5, 6, 7 aud 8. 1987.

All railroads will offer reduced aates.

The President, Dr. Thos. Hunt Stucky, and the Chairman of the Committee of Arrangements, Dr. H. Horace Grant, promise that the meeting will be the most successrul in the history of the Association, and this promise is warranted by the well known hospitality of Louisville and Kentucky doctors.

Titles of papers should be sent to the Secretary, Dr. H. W. Loeb, 3559 Olive Street, St. Louis.

Opthalmia Neonatorum.

Dr. E. F. West of San Francisco, Cal., writes: "I have used Palpebrine with excellent results in Opthalmia Neonatorum of severe types. Cleansing the eyes with a 25 per cent. solution every half hour. A few drops of full strength applied 4 times a day."

Tubercular Necrosis of the Prostate.

Dr. Eugene Fuller, at the recent meeting of the American Association of Genito-Urinary Surgeons, stated that tuberculosis in connection with the prostate is spoken of in most text-books as of common occurrence. Most of those writers, however, use the term "prostate" very loosely, it being made to include besides the prostate proper, the neck of the bladder, the deep urethra and the seminal vesicles, together with their ducts. Dr. Fuller expressed the opinion that while tuberculosis in connection with the deep urethra and the genital tract is of common occurrence, tuberculosis of the prostate is rare. In tuberculosis connected with the seminal vesicles the loose connective tissue enveloping the sacs become infiltrated with a hard inflammatory exudate which appears to the finger-tip introduced into the rectum as a firm tumor of considerable size. A surgeon, on feeling such a mass, almost invariably pronounces it prostatic enlargement. If, however, a dissection be made in a case of this description, the prostate itself will in most instances be found normal, although encased, as it were, in the inflammatory exudate which has been thrown out about the diseased seminal vesicles, and which has extended itself into the meshwork of the fibrous structure forming the capsule of the prostate. Tuberculosis in connection with the deep urethra tends to extend itself along the ejaculatory ducts and into the seminal vesicles rather than into the prostate. Still, in cases where tubercular ulceration of the prostatic urethra occurs, the portion of the gland lying next the urethra becomes secondarily involved by the ulcerative process, which may and rarely does extend so as to eventually cause its total destruction. Very infrequently tuberculosis may attack the prostatic body primarily and independently of the deep urethra or the genital tract.

X Rays Dermatitis.

Is what Dr. T. C. Gilchrist, of the Johns Hopkins Hospital, calls the new disease caused by too frequent exposure of the hand or other parts of the body to the effects of the X rays.

In the case of a young man who was exhibiting one of these machines at Medical Society meetings, who was suffering from such, Unguentine was applied twice daily for a week, effecting a complete cure.

A free sample and literature to all who write to the Norwich Pharmacal Co., Norwich, N. Y.

Renal Suppuration.

Dr. Thomas H. Manly (American Medical Association) said that during the past two years several cases of renal lesions had come under his notice, of a class by no means uncommon nor in his experience, until very recently, studied with that care which their importance merited. Much confusion and disorder yet remained in our views on the pathology, diagnosis, and treatment of purulent kidney. Among the local causes of renal suppuration were lithiasis (calculous impaction) and contusion or laceration. Among the consecutive, or constitutional, causes were infection (presumably by way of the circulation), tubercle, ascending infection (vesical), and contiguous infection, from the colon, etc.

One striking clinical feature about a large renal abscess was that it rarely involved more than one side, and that the right; and in its incipient stages was painless, unless the purulent *foyer* had opened into the urinary stream.

In the male subject, nephropyosis was often dependent on calculous prostatic or urethral obstruction in about one-third of the cases, according to Dickinson. Another third would depend on renal concretions, and probably the last third on the infections. Gonorrhœal pyelonephrosis was yet doubted, and in all instances it was difficult to detect the tuberculosis bacilli. Cystitis was almost a constant symptom in all chronic cases of supurative kidney when the urine had undergone ammoniacal decomposition.

A microscopical examination of the sediment in pyuria, by an experienced person, would quite universally decide the source of the pus, whether it was urethral, prostatic, versical, ureteral, or renal. It was necessary, however, that the microscopist should have had a special training in this line of analysis. It was of the greatest importance in all cases that the urine be secured fresh and that several specimens be examined for several days before a definite opinion was expressed. The site of the lesion was decided in all cases by the presence of characteristic epithelia, which were invariably present though in certain stages of renal suppuration they were so disintegrated or transformed as to defy detection; but after an interval of a day or two abundant ephithelial casts and cells were readily seen. It was imperative under all circumstances, so far as possible, to eliminate sources of error in the microscopical analysis of the sediment; hence in women we must exclude uterine, cervical, and vaginal suppuration by inspection. In men we

might exclude the urethral source of pus by catheterizing the bladder.

The exploratory incision as a means of diagnosis alone, in cases of renal lesion, could be mentioned only to be condemned, unless an operation for cure or relief immediately followed. The general impression that purulent kidney was a surgical lesion under all circumstances was unwarranted, as this pathological state was largely influenced by hygenic and internal therapeutic means. But when internal remedies failed we were enabled to proceed intelligently and directly with operative surgery.

The Toxicity of Human Perspiration.

Dr. M. Arloing (British Medical Journal) has reported some interesting observations on this subject. He found as a result of making intravenous injections of natural perspirations and also of prepared extracts of the same that when the strength of the injection approached fifteen centimetres per kilogramme in the case of the dog, and twenty-five centimetres per kilogramme in the case of the rabbit, death almost always occurred, generally within three days, though sometimes not for some weeks, when it followed upon a state of profound cachexia. The injection of one-sixth, one-quarter, or one-third of the lethal dose led, according to his observation, to immediate and proportional effects. The toxicity varied with the environment of the subject which furnished the perspiration as well as with the mode of preparation of the extract. The perspiration secreted during arduous muscular toil is richer in toxic principles than that secreted during the ordinary circumstances of life, the degree of extra malignity amounting to 25 or 30 per cent. All things being equal, perspirations obtained by artificial means of sudation present a minimum of toxicity, but perspiration obtained from a subject who has suffered from retention of the secretions due to cold is poisonous.

The Indian Territory Medical Association met at South McAlester, I. T., June 29th and 30th, 1897. They selected Muskagee, I. T., December 7th and 8th, 1897, as the next place and date of meeting. They elected the following officers for the ensuing year:

Dr. E. N. Allen, South McAlester, I. T., President.

Dr. G. W. West, Eufaula, I. T., First Vice-President.

Dr. J. B. Rolater, Oklahoma City, O. T., Second Vice-President.

Dr. LeRoy Long, Caddo, I. T., Sec'y.

Pulmonary Tuberculosis Communicated from Husband to Wife

Dr. Merrill reports, in the London Lancet, the case of a woman, thirty-six years old, who came under observation with pulmonary tuberculosis. Inquiry elicited the fact that her family history was good and free from suspicion of tuberculosis. Her husband, when she married him, was apparently healthy, but his father and a sister had died from pulmonary tuberculosis. After a time he developed cough, spat blood, and ultimately died from pulmonary tuberculosis. During the last seven months of his life he was too weak to go out, and his wife nursed him incessantly. They had only one small room and the fire was kept burning day and night. The man expectorated a good deal and no directions were given as to the use of antiseptics. Soon after his death the wife noticed that she had a bad, cough and when she came under observation it was found that she had cavernous breathing, with whispering pectoriloquy at the apex of the right lung, and dulness and crepitation at the left. She stated that she was no worse off in consequence of her husband's death, but that, on the contrary, her means had improved, as during her husband's illness she had to keep him. As Murrell points out, this case is of no particular interest in itself, but it becomes so when taken in conjunction with similar cases recorded in literature, as marking the change of opinion respecting the contagiousness of tuberculosis which has taken place. In the past such cases were regarded with suspicion and their publication excited hostile criticism; now they have become so common as to excite but little comment. Dr. Hermann Weber has given details of thirty-nine wives who became infected from marrying tuberculous husbands, and in several instances the husband infected more than one wife. The reason that the husband infects the wife more frequently than the wife the husband resides in the fact that when the husband is ill the wife nurses him, but when the wife is ill the husband, from the increased demands on his resources, has to pay closer attention to business and is less at home than usual.

Appendicitis.

The New York Medical Journal contains a very interesting article on appendicitis. The author says: No fixed rule can be laid down for deciding in the early stages between the mild and severe cases. No man is capable of deciding the question correctly in all cases, but to one properly experienced,

an indescribable character of some one symptom may indicate a malignant process. Cases may be classed in three groups: (1) those in which operation is unnecessary and in which expectant treatment should succeed; (2) those in which operation is advisable, but in which delay may do no harm; (3) those in which operation is imperative, and is the only safe method of treatment. The first group is limited to the cases of primary catarrhal appendicitis without suppuration and without gangrene. The second group embraces all cases of recurrent and relapsing appendicitis. The third group embraces all malignant cases. Proper expectant treatment: Put the patient to bed and keep him there. Apply over the whole right iliac region a soap "poultice," consisting of a thick layer of green soap, spread on a single layer of muslin or lint. Over this apply an ice-bag or ice-coil. Relieve bowels by soap and water enema. Keep the stomach at rest while vomiting exists. Restrict the patient to milk or clear broths. Note the temperature, pulse, and respirations every four hours. Give no drugs. *Never* give opium or morphine in case of appendicitis, except in cases of abdominal shock from rupture of appendix or abscess.

The Relation of Angina Pectoris to Dilatation of the Heart.

Dr. J. H. Musser (Congress of American Physicians) said that patients who have had an attack or attacks of angina pectoris are relieved of the paroxysms if dilatation of the heart supervenes. Often, if dilatation persists, the patient may live for years and no other paroxysm occur. It seems the pain, so long ago pointed out, is due in large part to the stretching of a tense ventricle from intracardiac pressure. Such stretching is not so likely to occur in dilatation, because of "safety-valve action" in the heart. The idea appears to explain the infrequeney of agina in the young; in mitral valvulitis with regurgitation; in women, possibly; and in the occupants of infirmaries and hospitals. In the latter class the vigor of the heart muscle is lessened from lack of food, etc. Certainly it is not because of the absence of atheroma of the coronary arteries, for endarteritis is very prevalent among senile, usually alcoholic, perhaps syphilitic inmates of the hospitals and almshouses. If the contention is true, the diagnosis, prognosis, and the treatment tentatively admitted are influenced thereby—the diagnosis, in that anginalike paroxysms in dilatation of the heart are probably not due to true angina pectoris; the prognosis, in that, if, as rarely happens, an undoubted attack of angina occurs in a case of valvulitis with dilatation, and even failing compensation, on the one hand the patient is not likely to perish from the agina, because of the safety valve, while, on the other hand, it indicates that there is sufficient strong muscle fiebre to insure cardiac recuperation. Further, if a patient subject to attacks of angina presents signs and symptoms of dilatation, the agina will disappear, or at least never be so severe as to terminate fatally. That the pain is due to intracardiac pressure is more possible, because of the presence of dilatation of the heart in agina sine dolore.

The Absorption of Fluids by the Peritoneum.

Robinson (Annals of Surgery) regards it as more of a physical than a vital process. It cannot be due to vital-cell processes, for absorption proceeds many hours after death, and, moreover, such absorption in not interfered with by energetic chemical or thermic injuries to the peritoneal endothelium. Intra-abdominal pressure is, on the other hand, a distinct factor in peritoneal absorption. Intra-abdominal pressure may be regarded as muscular tension plus atmospheric pressure, and up to a certain point the amount of absorption is in direct ratio to the amount of pressure. Intra-abdominal pressure and filtration are closely associated, and the latter process is distinctly helpful. Capillary or molecular inhibition is difficult to dispose of, but the probabilities are in favor of its playing a considerable *role* in the process. Osmosis and the presence of stomata are also beneficial, but the author does not think that peritoneal fluids are directly absorbed by the blood vessels. Peritoneal absorption must, therefore, be sought along the lines of osmosis, the inter-endothelial stomata, and filtration.

The Influence of Ether Anesthesia on the Blood and Urine.

From a very extensive study of the influence of ether anesthesia on the blood and urine, Lerber comes to the following conclusions: (1) That ether anesthesia in men has no destructive influence on the red-corpuscles; (2) that it causes a very marked leucocytosis, the maximum amount of leucocytosis being first found immediately after the anesthetic is well drawn; (2) ether anesthesia may produce albuminuria, yet, even where there are diseased kidneys, ether is preferable to chloroform, since the latter has a comparatively greater deleterious influence on nephritis.

Exploratory Laparotomy in Malignant Disease of Abdominal Organs.

On May 13th, at the British Gynæcological Society, Dr. Herbert Snow (British Medical Journal) read a paper on the value of exploratory laparotomy *per se* in (*a*) real, (*b*) supposed, malignant disease of abdominal organs. He had been struck by the remarkable improvement in certain cases of indubitable malignant disease which followed a simple incision without further operative procedure; and thought that if future explorations were scanned in the light of expected amelioration, it would be found that the peritoneum, thus stimulated, behaved to a certain extent as in tuberculosis. In illustration of this he read notes of some cases: (1) A woman aged 49, with advanced carcinoma of the sigmoid flexure, gained flesh and lost all bad symptoms, though the favorable change lasted only six weeks. (2) A woman, aged 55, with rapidly advancing and very vascular deposit in the omentum, secondary to breast scirrhus. After incision the advance was materially checked, the mass diminished in size, there was no ascitic trouble, and the patient lived eighteen months. (3) A man, aged 58, with extensive deposit of carcinoma along the whole posterior surface, and most of greater curvature of the stomach. After incision great improvement took place, but the patient was quickly lost sight of. (4) A man, aged 64, with a large sarcomatous mass infiltrating both recti. Since exploration in June, 1896, the growth had diminished, the man had no bad symptom, and was able to work regularly as a sawyer. (5) An exploratory incision was performed in the case of a woman for a renal growth infiltrating the lumbar muscles, and thought, perhaps erroneously, to be cancerous. All bad symptoms had subsequently vanished. (6) A woman, aged 48, with carcinoma of the gall bladder. After exploration she stated that she felt better, and more free from pain than she had been for months. She went home and has since succumbed. From a recent paper by Mr. Leonard Bidwell two cases of diffused peritoneal cancer were quoted, in which very pronounced benefit similarly followed laparotomy *per se*. Others were cited in which the diagnosis of abdominal lumps was shown to contain, in even the ablest hands, a strong element of uncertainty. The author concluded that routine exploration should be early resorted to in every instance of supposed abdominal cancer for two reasons: (*a*) The possibility of error, (*b*) the fact that as a mere measure of treatment this step always improves, and often materially checks the advance of truly malignant disease, permitting scope for the administration, on which he placed the greatest reliance, of opium with cocaine.

The Prevalence of Bovine Tuberculosis and Its Possible Extinction.

Every now and then, says the London Lancet, public attention is called to the great and probably increasing prevalence of tuberculosis among cattle or, more correctly, among cows; for, if we had no more precise information, the disproportion between the 3 per cent. or less of carcasses in the meat markets in which the most careful inspection detects the evidence of disease and the 30 to 60 per cent. or more of cows on dairy farms in which the tuberculin test proves it to be present would be enough to show that tuberculosis is practically restricted to the latter. For the bullocks roaming in the open field or mountain pasture enjoy comparative exemption, and the tuberculous meat in the market is almost exclusively the flesh of cows fattened for the butcher either on account of their age and lessening yield of milk, or from their showing symptoms of the disease in its earlier, though easily recognized stages. There can be no doubt that, though their flesh may at this period be consumed without danger, its quality is deteriorated and its money value proportionately reduced, and that, though their milk may not be already defective, it may at any moment become so, should the glands of the udder be implicated. Unlike human beings, horses and dogs, cows are notoriously stolid and undemonstrative, even when suffering from grave disease, as tuberculosis or cancer; but it is strange that, on grounds both of danger to the public health and of pecuniary loss to the owners, farmers should be so apathetic as to the existence of a disease the aggregate loss from which must be greater than that caused by occasional outbreaks of such affections as pleuro-pneumonia. Tuberculosis, however, being, like other specific diseases, the microbes of which cannot perpetuate themselves for long out of the living body, contracted, whether directly or indirectly, solely by contact or association with other individuals already suffering from it, could be extinguished by rigid segregation and isolation of the healthy from the diseased. Such a procedure cannot indeed be seriously thought of with regard to human beings, and the futility of quarantine and sanitary cordons to arrest the spread of the highly infectious cattle

plague has been as conspicuous here as in the case of cholera; but the conditions under which cows are kept on dairy farms, while calculated to favor, if not to render inevitable, the spread of any infectious disease, are also such as to present every facility for the elimination of tuberculosis, requiring as it does for its communication close and prolonged association. The observations of Koch on rodents, of Bang on cattle, and of Boltz on children, not to mention other names, furnish abundant evidence as to the extreme rarity of direct transmission from parent to children. Congenital tuberculosis is in the highest degree exceptional, the progeny of tuberculous parents being almost always born free from the disease and remaining so if removed to healthy surroundings immediately after birth; while in the characteristic reaction produced by the injection of tuberculin there is a well-nigh unerring means of diagnosing the existence of the disease, if not in its very earliest beginnings, at any rate at a stage when it is presumably not as yet communicable to others. Bang, whose procedure has been carried out successfully on numerous estates in Denmark, has shown that it is possible to eliminate tuberculosis from a herd in the course of two or three years, without having recourse to the drastic measures employed in the case of cattle plague and pleuro-pneumonia, and with little or no pecuniary loss at the time, but with a great gain in the end. His method consists in testing the entire stock by one or two injections, and the removal of all those that react to a separate establishment at as great a distance from the others as possible. All new purchases are tested in like manner, and the process of inoculation of the apparently healthy animals, with the separation of those that react, is repeated every six months until they cease to give any result. Those that give evidence of being tuberculous are fattened for the butcher, but if already in calf or but very slightly diseased they may be allowed to calve once, or perhaps twice, provided their milk is not used for any purpose except for feeding pigs, and that after being boiled, their calves being transferred at birth to the healthy establishment and tested when about six months old. If public opinion in this country be not ripe for compulsory legislation, it is much to be desired that the county councils should at any rate encourage the practice by diffusing information on the subject and by providing free of cost a supply of tuberculin and the services of expert veterinary surgeons to perform the inoculations and direct the subsequent arrangements.

Appendicitis in Children.

The British Medical Journal says that Mlle. Gordon deals with this infection on the basis of upwards of eighty cases treated by Broca during a period of three years at the Hospital Troussea; seventy have not been previously published. The proportion of boys and girls was nearly three to one (fifty-eight to twenty-one); five were aged between two and five, twenty-five between five and ten, and forty-one between ten and fifteen years. Broca operated in seventy-two cases with a mortality of thirty-five per cent. The resection of the appendix was performed in thirteen cases after the inflammation had subsided, in all with rapid and complete success; and in five cases during the acute attack, with three deaths. The mortality, including the cases not operated on, was thirty-two per cent. Mlle. Gordon concludes that pathogenesis from a closed cavity is not applicable to the appendicitis of children, in whom calculous or inflammatory obliteration of the appendix is rare; the predominant anatomical lesions are perforation and gangrene. Only two distinct forms of acute appendicitis are to be distinguished clinically—that in which the peritonitis, though purulent, is encysted, and that in which it is generalized. The elective treatment for the former is, in benign cases, resection of the appendix after the inflammation has subsided. When the intervention is one of necessity an inguinal incision or one along the external border of the right rectus should be made, but no search for the appendix. When the case is one of general peritonitis with a local iliac focus, median and lateral laparotomy is indicated

Sanmetto a Standard Medicine.

I have had occasion to use a considerable quantity of Sanmetto in bladder and urethral troubles, and have so far invariably found it equal to the occasion. It is assuredly as much a specific for the various ailments of the bladder and its appendages as quinine is for ague. That is saying a great deal—but it is true. Sanmetto is certainly a standard medicine, and deserves every confidence of the physician. I shall continue to use it in my practice with perfect confidence in its great merit.

Jas. T. Atchison, M. D.
Lochland, Ky.

Electricity.

The Journal of Electro-Therapeutics offers the following suggestions regarding the use of electricity:

The faradic or interrupted current cures disease mainly through physiological and mechanical processess, producing no appreciable chemical effect in the tissues.

In each faradic battery there should be two coils—primary and secondary.

The current from the primary coil has greater quantity and produces greater mechanical effects, but lacks penetrating power, and is more useful in superficial troubles, particularly where mechanical effects are desired,

It is also of service in internal treatments for many vaginal and uterine diseases.

In the primary current there is some difference in polarity, the positive pole producing greater sedation, and the negative pole greater stimulation.

The secondary coil produces a current having much greater penetrating power than the primary current.

It will more easily overcome resistance on account of its greater tension, and is to be preferred to the primarry current in treating deeply seated conditions.

There is no appreciable difference in polarity in the current from the secondary coil.

The current from the secondary coil is much more pleasant in its effect, particularly to nervous subjects.

In the direct galvanic current there are no interruptions to the current, as in the physiological and mechanical effects.

There is no sensation to the current beyond a feeling of numbness and burning beneath the electrodes.

In general terms, it may be stated that the faradic current is to be preferred in muscular troubles, and the galvanic in nervous diseases.

The galvanic current will produce a greater degree of sedation or stimulation.

The galvanic current should be used to stimulate the absorbents, to remove effusions, morbid growths, callosities, tumors, facial blemishes, superfluous hair, etc. In these conditions the faradic current is practically powerless.

The positive pole of the galvanic current is much more sedative, and the negative pole much more irritating and stimulating,

Electrolysis and cataphoresis can only be used with the galvanic current.

To produce the most pronounced sedative effect and allay irritability make stable applications of the positive pole, galvanic current,

To produce the most marked irritation use the negative pole of the galvanic battery, or reverse the polarity frequently.

Electricity has a decidedly refreshing and soothing effect upon the entire nervous system, and is of great service in nearly all nervous diseases.

Either faradic or galvanic current will equalize the circulation, increase the flow of blood to the surface and extremities, and improve nutrition and assimilation.

Materials Employed in the Silver Treatment of Wounds.

1. Citrate of Silver, chemically pure (Arg. citr. puriss.), a white stable, odorless, non-irritating powder, soluble in the proportion of 1.3800 parts of water. This is the chief antiseptic for wounds; for, the smallest quantity of it dusted upon a lesion keeps it permanently sterile. In solution of 1 to 4-8000 it is employed for irrigation of the cavities of the body.

2. Lactate of Silver, chemically pure (Arg. lact. puriss.), a white, permanent powder, soluble 1 part in 15 of water. In the solid form it is somewhat irritating, and it is most useful for the preparation of disinfectant solutions of the strength of 1 to 100-2000, and for the preparation of silver sutures and drains.

In the fluids of the animal body both salts show a greater antiseptic power than does the sublimate, without having its disadvantages. Watery solutions are best made twice as strong as those of sublimate to have about the same effect.

3. Tablets of Citrate of Silver of 0.1 grm. (1½ grains), for the convenient preparation of solutions for irrigation, injection, and gargles.

4. Tablets of the Lactate of Silver, each 0.2 grm. (3 grains), to be used instead of sublimate tablets.

All these four preparations are made by the "Chemische Fabrik von Heyden," Radebeul, near Dresden.

5. Silver Gauze, a muslin evenly, powerfully, and permanently impregnated with metallic silver; it develops its antiseptic properties wherever the tissue fluids form acids, which unite with the silver to form the antiseptic salts. This occurs, for instance, during the life action of the schizomycetes, and continues as long as any silver is present. It is not necessary to use it in wounds that have been dusted with the Citrate of Silver; ordinary sterilized gauze is sufficient here. In cases where this has

not been done, it forms an unchangeable and ever-clean dressing, which in itself disinfects smaller wounds and keeps non-infected larger ones sterile, It is especially valuable for use outside the larger hospital centers, and is prepared by Max Arnold in Chemnitz.

6. Citrate of Silver Bougies, prepared from pure cocoa butter, and containing 2% of the Citrate. They are valuable for the disinfection of deep fistulas, the urethra, the bladder, the uterus, etc.

7. Silver Silk, Silver Catgut, and Silver Drainage Tubes. These can be prepared by the physician himself or by any manufacturer of surgical dressings. The raw material, without any special preparation, is put in a wide-mouthed, brown-colored glass bottle containing a 1% solution of the Lactate of Silver. Silk should remain immersed therein 14 days, catgut and drains 8 days; then the material should be taken out, thoroughly rinsed in ordinary water until the latter remains clear, and then exposed to daylight until it becomes blackish brown in color. It is to be preserved well wrapped in several thicknesses of gauze; and immediately before it is used it should be laid for a few minutes in boiling water and rinsed therein. Silk and catgut can be appropriately kept in alcohol. The silver that they contain make the ligatures antiseptic of themselves, where that is necessary.

Directions for Cleansing—for Physicians and Nurses.

1. Thorough soaping and scrubbing of the hands and forearms, special attention being paid to keeping the nails short and smooth.

2. Rinsing with pure lukewarm water.

3. Washing and brushing the hands and forearms with a solution of the sublimate 1 to 2000, or of the Lactate of Silver 1 to 1000.

4. After each contact with non-disinfected articles, washing of the hands with soap and rinsing with pure water.

For the portions of the patient's body that have been injured or are the seat of operative procedure:

1. A general bath some time during the twenty-four hours preceding the operation.

2. Soaping and shaving of the field of operation.

3. Rinsing the same with boiled water.

4. Brushing or rubbing the same with ether.

5. Rinsing with boiled water.

6. Brushing or rubbing with sublimate solution 1 to 2000, or Lactate of Silver solution 1 to 1000.

7. Rinsing with boiled water.

8. Covering the neighborhood of the field of operation with linen cloths which have lain in sublimate water 1 to 2000 for ten minutes immediately before the operation, or which have been boiled.

9. During and after the operation protective cleansing of the field of operation with 1 to 2000 sublimate, or 1 to 1000 Lactate of Silver solution.

10. Cavities are to be irrigated with 1 to 500-2000 Lactate of Silver, or 1 to 4000 Citrate of Silver solution.

"Is Malaria a Water-Borne Disease."

Dr. Pupert Norton says (John Hopkins Hospital Reports) that there are several points in the consideration of this question which make an exact answer extremely difficult. First and foremost stands the fact that the malarial organisms, those forms producing malarial fever in mankind, have not been recognized outside the blood of human beings. Other similar types or species of organisms have been found in the blood of frogs, birds, etc., but these do not seem to be of the same species as that which produces the fever in human beings. Another difficulty is the occurrence of malarial fevers and typhoid fever in the same places at the same time of the year, oftentimes with very similar types of fever. Again, it is generally supposed that the malarial organisms exist in the soil, and we know that typhoid fever may be communicated by drinking-water, the belief is a common one that malarial fever may be induced in the same way. Malaria is almost as widespread a disease as typhoid, and yet does not occur in epidemics. We do not find in towns or elsewhere groups of patients whose infection can be traced to a single supply of water or milk.

All the evidence that has been so far collected to confirm the water-borne theory is not of sufficiently exact quality to carry much weight. To prove that malaria is water-borne in a given case demands certain conditions, and even if all these demands could be satisfactorily met, there would at the present time still be the proof lacking that the malarial parasite lived in the water. Outside of the human body we know nothing of the life-history of this parasite.

To confirm our view we have the definite knowledge that drinking-water from malarial places does not produce the disease experimentally. And finally, it is

probable that a large number of the cases attributed to malarial infection are not malarial, but rather typhoid, and if not the latter, then due to some auto-intoxication from the intestine. Further, says the author, until we know more of the life-history of the malarial parasite outside of the human body, it is fair to question the water-borne theory of malaria.

Auto-intoxication.

In the Edinburgh Medical Journal, Singer discusses this question, with particular reference to tetany and skin diseases. He considers that some confusion has arisen owing to want of care in the clinical descriptions of gastric conditions, whence harmless atony of the stomach (gastroptosis) has been confounded with true dilatation (gastrectasis). He quotes the following interesting case of autotoxic tetany. The patient was a man, aged 41, who was attacked with diarrhœa and weakness after eating roast pork; three days before admission to hospital constipation set in, and this was followed next day by typical tetany. On admission the urine contained no albumen, but indican, diacetic acid, acetone, and aromatic oxyacids; the great curvature of the stomach extended down to the umbilicus. Under treatment with calomel and purges, followed by iodoform internally, the tetany cleared up and the condition of the urine became normal. There can be no doubt that in this case the tetany resulted from the absorption of poisonous products from the intestine, and was determined by the constipation. The author is not inclined to regard the classification of chlorosis among the auto-intoxications with much favour, many cases so described really belonging to the group of secondary anæmias; still, as Meinert has shown, chlorosis is often associated with enteroptosis. With regard to skin affections, Mracek found that in a case of psoriasis the ethereal sulphates and diamines in the urine were increased, and the author after investigating the condition of the intestine in a large number of dermatological cases, proved that all the signs of increased intestinal decomposition were present in acute and chronic urticaria, in acne, erythema, and pruritus. These conditions were best treated by an internal antiseptic such as menthol. Kaposi has also obtained good effects in prurigo by the internal use of carbolic acid; Singer has seen two cases in children of the same family who developed prurigo whenever their digestive systems went wrong, and recovered when these were cured. It must not be forgotten, however, that the skin is only capable of developing a certain number of eruptions, and that in consequence the same lesion need not always be due to identical causes. The proof of auto-intoxication will depend mainly on examination of the urine and of the intestine. Constipation with stagnation of the intestinal contents is the commonest cause, and in cases where constipation and diarrhœa alternate, rashes may come and go. In treatment the greatest attention must be paid to diet, in order to diminish the bacterial contents of the bowel.

The Question of Puerperal Self-Infection.

Jewett (American Gynecological and Obstetrical Journal) in his studies relating to pus-producing germs primarily present in the body of the pregnant woman in connection with childbed sepsis, draws the following conclusions:

1. There is no clinical proof that puerperal infection can occur from normal vaginal secretions.
2. All childbed infection in women previously healthy is by contact.
3. Prophylactic vaginal disinfection as a routine measure is unnecessary, and even in skilled hands it is probably injurious.
4. Its general adoption in private practice could scarcely fail to be mischievous.
5. In healthy puerperæ, delivered aseptically, post-partum douching is also contra-indicated.
6. A purulent vaginal secretion exposes the woman to puerperal infection.
7. In the presence of such discharges at the beginning of labor the vagina should be rendered as nearly sterile as possible.
8. Concentrated antiseptic solutions should not be used, and the process should be conducted with the least possible mechanical injury to the mucous surfaces.
9. In case of highly infectious secretions, the preliminary disinfection should be followed by douching at intervals of two or three hours during the labor.
10. The safest and most efficient means for correcting vicious secretions is a mild antiseptic douche, repeated once or more daily for several days during the last weeks of pregnancy.
11. Clinically, the amount of discharge, its gross appearance, and that of the mucous and adjacent cutaneous surfaces usually furnish a sufficient guide to its treatment.
12. Probably unclean contact within twenty-four or forty-eight hours is an indication for prophylactic disinfection.

A New Preparation of Coaltar and Its Medicinal Uses.

Dr. A. Sack (Lancet, July, 1897) has recently employed with advantage, in the treatment of various skin diseases, the following mixture, which represents a perfect solution of coaltar with all its component parts:

℞ Coaltar..... .....10 grams.
Benzene.....20 grams.
Acetone..... .....77 grams.
Mix. For external use.

The mixture exhales a pleasant aromatic odor, and is not in the least irritating to the skin. When applied with a brush, it rapidly evaporates, leaving on the skin a fine homogeneous, yellow layer of tar, which can only be removed by repeatedly washing the region.

Dr. Sack has obtained excellent results from such applications in eczema, more particularly the variety associated with intense pruritus and extensive lichenification, in ringworm and in parasitic cycosis at the period of decrease of the pustules, in dysidrosis, and in the various seborrheic affections, especially of the scalp.

When dealing with dermatoses with considerable hyperkeratinization, it is necessary, in order to soften the horny substance, to add salicylic acid, with or without resorcin, to the tar solution, as follows:

℞ Coaltar..... 10 grams.
Benzene.....20 grams.
Acetone.....77 grams.
Salicylic Acid..... 5 grams.
Mix, For external use.

℞ Coaltar..... 2 grams.
Benzene..... 4 grams.
Acetone.....16 grams.
Salicylic Acid..... 2 grams.
Resorcin ..... 8 grams.
Mix. For external use.

The first of these preperations is employed in the same manner as the solution of pure coaltar; the second is substituted for the ointments usually sesorted to for cleansing eruptive patches.

Medical Association of Alabama.

Officers elected for the ensuing year are: President, Dr. L. L. Hill, of Montgomery; Frst Vice-President, Dr. J. C. Legrand, of Anniston; Second Vice-President, Dr. E. L. Marechel, of Mobile. Councilors, Drs. Seeley, of Montgomery; Saunders, of Mobile; and Furness, of Selma. Orator, Dr. W. W. Harper, of Selma. The association will meet next year in Birmingham.

The Therapeutic Value and Administration of Iron.

It is the purpose of the writer to go over the therapeutic preparations of iron, and to give what is considered the best means of exhibiting so important a remedy. While the profession fully values iron, there is no doubt that failure to obtain the results which this agent is capable of rendering is often due to the fact that a preparation is employed which is not readily assimilated. When taken into the mouth the soluble preparations of iron exert an astringent effect. Iron as is well known is one of the proximate principles of the economy and is an essential part of the food. A great many of the ordinary preparations produced constipation. Iron is a tonic which exerts a marked influence on the nerve centers, but the good results which we obtain from it are the improvement it makes in nutrition. In anæmia it increases the number of blood corpuscles, and is therefore considered a specific for that affection. The hæmoglobin of the blood is brought up to the healthy standard under its use. By the improvement in the quality of the blood, the heart's action becomes better, and anæmic patients who before its administration suffered with palpitation and frequent attacks of syncope soon lose these symptoms, after getting under its influence. The stomach is usually stimulated and the appetite is improved, when a pure non-irritating preparation is exhibited. Binz says "The contact of the latter (iron) with the mucous membrane causes a certain amount of constipation. If a solutlon of iron be injected into the blood of an animal, the metal soon appears in abundance as albuminate on such secreting surfaces as generally pour out albuminate secretion. The reason of this is the blood corpuscles in every part of the body assimilate the albuminate of iron, if its particles be sufficiently minute.

The field in which iron is employed with greatest confidence is where we have anæmia—and it is a specific for this affection when it is given in a form acceptable and easily assimilable, In chlorosis it is also given with excellent results. Fothergill lays down this rule as one indication for the exhibition of iron "When the tongue is dry and red, iron always disagrees and should not be ordered. On the other hand, a pale broad and flabby tongue is especially indicative of the demand of the system for iron" (Shoemaker).

In amenorrhœa iron is given with decided benefit and when this trouble is due to anæmia, the action of the remedy is pronouncedly favorable. To get the best re-

sults it must not be given in appropriate form but regularly. This point is especially mentioned because in many cases where the action of the iron is not seen after the drug has been taken for a time it is due to the fact that the preparation has not been faithfully taken by the patient. In chlorotic girls this is often the case and the practitioner must endeavor to get the parents of the patient to aid him.

In the treatment of enlarged spleen due primarily to the action of malaria, the effect of iron is generally most beneficial—probably because it overcomes the anæmia usually associated. In the treatment of neuralgia iron may be effectively employed in a great many cases, since that affection very often results from anæmia. In persons subject to attacks of articular and muscular rheumatism, we often find great improvement after a course of iron. In syphilis it is frequently given with much benefit especially when anæmia is a marked feature. It may be said in a general way that iron is indicated in pure anæmia, and in all other affections in which that condition is a factor. To administer iron properly if of a degree of importance which we cannot overestimate The giving of the rod tincture of the chloride is open to many objections. That preparation is very disagreeable to the palate, and often produces gastric disturbance, constipation and other diseases. The albuminate af iron is considered by the ablest men in the profession as the available preparation, as it is readily absorbed, and we can depend upon it to produce the best results. Liq. Ferri Albuminati (Drees) is a common form of prescribing it. This remedy is prepared with extreme care, and it does not prove disappointing as is too often the case with other remedies of this class.

Dr. A. C. Kenner,

Louisville, Ky.

On the Treatment of Catarrhal Diseases in St. Elizabeth's Hospital, Vienna, with Guaiacol Carbonate [Duotal].

In his article on "The Creosote Treatment in Childhood," (Wienor Medizin, Blatter, 1896, No. 49), Dr. Hock emphasizes the value of creosotal not only in cases pronounced pulmonary disease, but also in the treatment of the catarrhs that are frequently left behind by whooping cough and measles, and which are well known as the prodromata or predisposing causes of tubercular infection. Treatment with the ordinary expectorants, as is usually recommended, is here entirely useless. Besides the hydriatic treatment, it is only from that with creosete that we may expect favorable results." Creosotal is especially useful in the treatment of these cases, and Dr. Hock is in the habit of employing the sollowing formula:

Creosotal..... 3-5.0 (3-4 to 1¼ drachms)
Ol. Morrhuæ...100.0 (3¼ ozs.)
Saccharini.....0 05 (3-4 grain)

To older children who do not want to take cod liver oil, the Creosotal was given in alcoholic solution and in drops, or emulsified by drops in sugar water.

"The dosage in children less than one year old was 0.15 (2¼ grains), gradually increasing to 0.5 (7½ grains), or from a teaspoonful of 3% Creosotal-cod-liver.oil to two teaspoonfuls of a 5% solution. Older children took from 0.5 (7½ grains) to 1.5 (22½ grains) daily.

The great prevalence of catarrhal troubles during the last winter gave me an excellent opportunity to experiment upon adults with Guaiacol Carbonate, which has an analogous action to that of Creosote Carbonate.[1]

In the period extending from January 17th. to February 12th, I treated 12 female patients of ages between 23 and 75 years who were suffering from acute bronchitis, complicated in some cases with influenza, with Guaiacol Carbonate. In accordance with the severity of the attack the following doses were employed:

1st day, mornings and evenings 0.5 gm. (7½ grains) of Guaiacol Carbonate. 2nd. and succeeding days, 1 gm. (15 grains) twice daily, or 1st and 2nd days, mornings and evenings, 1 gm. (15 grains).

3rd and succeeding days, 1.5 gm. (22½ grains) twice daily, or 1st day, 1 gm. (15 grains) twice, 2nd day, 1.5 gm. (22½ grains) twice, 3rd and succeeding days 2 gm. (30 grains) twice a day.

The effect of the remedy was usually apparent upon the second day, and latest upon the fourth, it showed itself by a reappearance of the appetite and a loosening of the mucous in the tubes. The expectoration ceased in from 14 to 24 days. In from two to three weeks the patients were discharged cured. The following condensed histories will illustrate my assertions:

1 Katharina Oetl, 67 years old, fell sick on January 17th, with acute bronchitis. On the first day the patient was given morning

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1 As is well known, guaiacol is the chief consituent of creosote. The value of a specimen of creosote depends upon the amount of guaiacol that it contains. Creosotal is a creosote that, by reason of its combination with carbonic acid, is transformed into a neutral, non poisonous, non-caustic body, without the loss of any of its therapeutic properties. Guaiacol Carbonate is guaiacol combined with carbonic acid in the same way.

and evening 0.5 gm. (7½ grains) of Guaiacol Carbonate, on the second day 1 gm., (15 grains), and on the third day 1.5 gm. (22½ grains). Increase of appetite and expectoration soon set in, and on February 3rd, she was discharged cured.

2. Theresa Crisch, 26 years old, suffering from acute bronchitis which begun on January 18th. For the first three days she was given 1.0 gm. (15 grains) night and morning; on the following days 1.5 gm. (22½ grains) twice a day. On the second day of the treatment an increase of the appetite was noted, the expectoration, which was at first very slight, became greatly increased by the fourth day, so that by February 7th, she could be discharged cured.

3. Maria Stoiber, 23 years old, was attacked on January 19th, with an acute bronchitis (influenza). On the first day she received 1 gm. (15 grains), on the second day 1.5 gm. (22½ grains), and on the remaining days 2 gm. (30 grains) of the Guaiacol Carbonate. The appetite began to reappear upon the third day only, but it rapidly improved; the mucous secretion was large from the very beginning of the treatment. On February 10th, she was discharged cured.

Besides these I treated six nuns, two of whom were aged respectively 79 and 81 years, for acute bronchitis. I gave them 1 gm. (15 grains) of Guaiacol Carbonate twice daily for three weeks. Appetite and expectoration reappeared upon the third day, and all the patients got well.

These very favorable results should encaurage us to further trial of Guaiacol Carbonate in acute bronchitis and other catarrhal diseases. DR. NIED.

Prophylaxis in Tuberculosis.

Dr. U. S. Davis, Jr., of Chicago has given a sketch of the prophylactic measures now generally accepted as advisable. (Chicago Med. Record). Although statistics show a diminution of the disease in large cities both in Europe and in America, there are possibilities of error in these statistics which must not be ignored. A better proof of the value of prophylaxis is the diminished amount of the disease in certain prisons, barracks, and buildings in which it has been endemic. The only thing that could affect this change is better hygiene. Dr. Davis wisely emphasises the fact that prophylaxis can only be successfully applied to tuberculosis by a careful education of medical men, and through them of the laity, as to the cause of the disease, the conditions under which it is most apt to arise, and the methods of destroying its cause and of avoiding these conditions. Especially is it necessary to educate those who are suffering from the disease as to its mode of communication. This may be best done by explaining to them that they are not only endangering the lives of their relatives and friends by carelessness in regard to the collection and destruction of their sputa, but they are endangering themselves by auto-infection. Ventilation of rooms occupied by patients suffering from tuberculosis is important, for it will prevent "house-infection." Physical training in children is a useful prophylactic measure, and during this period also attention should be paid to the condition of the tonsils and the upper respiratory passages, the nose and the pharynx, so that obstruction to the free entry of air into the chest may be early detected and removed.

Seasonal Fluctuations of Epidemic Diseases.

This was the title of a paper presented at the Epidermiological Society, May 1, 1897, by Dr. Andrew Davidson. He said (Lancet, June 5, 1897,) that these fluctuations recurred constantly in each country, but varied in different climates and regions. Differences of season, however, frequently corresponded with like conditions of temperature and moisture of the soil, as was seen by the curves representing the single wave of cholera in temperate climates and the single or double curves observed in India, where it was endemic, depending on the period of the rainy season or monsoons. In seeking the causes of these seasonal variations the diseases due to facultative saprophytes existing in the soil, such as cholera, enteric fever, malarial fevers, must be considered separately from small-pox and measles (obligatory carasites), which could be influenced by meteorologal conditions only, through the action of these on the resisting power or the habits and surroundings of the individual. Small-pox and measles had similar autumn, winter, spring and summer curves; but when introduced into a highly susceptible community spread irrespectively of season until the susceptible material was exhausted. The heights of the spring and autumn curves of measles were reversed in the English and Scotch towns, as well as in other countries. But comparing compound curves of series of years with single ones, it was seen that in most years only one was strongly marked. Habits of life, overcrowding in cold or wet weather, and the aggregation of children in schools, were factors not to be ignored, and as regards the latter it was

a common occurrence in Germany and Poland for an epidemic of measles to be restricted either to the Christian or to the Jewish population. Small-pox and measles had one or two annual curves in England, but were wholly absent during the absolutely rainless summer months. In London the death-rate from measles was highest in the second quarter in epidemic and in the fourth in non-epidemic years; but Dr. Davidson could not say whether the prevalence or the case mortality corresponded to the number of deaths, though the Hamburg returns showed such to be the case in that town. He would suggest in explanation of many of these phenomena that in non-epidemic periods only the more susceptible were attacked, and that the virus passing through such individuals gained in intensity and the disease spread further; but that when, as in epidemics the more resistent were attacked it became alternated in them until it died out. Why epidemics should usually occur in winter and spring it was not easy to say. In Europe, India and America small-pox followed approximately the temperature curve, though it began to rise in winter when the temperature fell, but attained its maximum with the spring. The regular appearance of small-pox in the winter was ascribed by Flügge to the aggregation of persons indoors, the lessf requent change of clothing, and the neglect of ablutions in cold weather; but this would not account for its maximum prevalence in early summer, and the conditions of domestic life in Europe did not apply to India where the same general curve was followed by the disease. It was easy to understand that faculative saprophytes multiplying in the soil were dependent on temperature and moisture, but these conditions could not directly affect those obligatory parasites whose soil was the living body; and these diseases followed their usual course irrespectively of climate and temperature. He had seen small-pox raging in Madagascar in 1868 when the temperature ranged between 90 and 100 degrees F., and in 1870 it prevailed in the Hudson Bay Territory with the thermometer at 4 degrees F. below zero. All alleged relations between the prevalence of measles and the temperature were true of particular countries only, and therefore could only be accidental. Weather conditions tending to induce catarrhs of the pharyngeal and the respiratory mucous membranes could not fail to render the individual more susceptible to infection from diseases, such as scarlet fever, diphtheria and measles, which were known to enter the body by these surfaces, and in like manner catarrh of the gastro-intestinal canal favored the development of cholera and typhoid fever.

Intestinal Gases, Physiological and Pathological.

It is hardly necessary to reassert, says Evans in the Lancet, that there are only three possible sources of gas in the gastro-intestinal tract, namely, (1) air swallowed, (2) gases transfused from or secreted by the blood, (3) gases arising from the fermentation of food stuffs. Apart from gases the result of fermentation, it is usually held that the most frequent cause of gastric flatulence is air swallowed with the food of saliva; in support of this statement we are told that the nitrogen in the gases of such cases occurs in about the same proportion as it exists in atmospheric air. and that carbonic acid gas is present in the same proportion as the oxygen in the air. The oxygen is presumed to be absorbed, and the carbonic acid gas transfused from the blood. This one can readily understand if one remembers that 100 volumes of arterial blood contain 20 volumes of oxygen and 40 volumes of carbon-dioxide, while in 100 volumes of venous blood there are 8 to 12 volumes of oxygen and 46 of carbon-dioxide, the nitrogen in both arterial and venous blood being merely 1 to 2 volumes to the 100.

In intestinal gases we find again that nitrogen is in a greater proportion than all the other gases. In meteorism resulting from a case of typhoid, according to C. A. Ewald, an analysis by puncture gave 8.3 per cent. carbonic acid gas and the remainder nitrogen. In a woman with a tight stricture of the rectum the gases obtained by means of a stomach tube consisted of 6.9 per cent. carbonic acid gas, 11.6 per cent. hydrogen, and 81.03 per cent. nitrogen. I do not intend to deal with the more simple problem of the presence of marsh gas after eating leguminous vegetables, or with the formation of sulphuretted hydrogen. The rapid production of intestinal gases after abdominal operations, in peritonitis and gastritis, in hysteria, in certain affections of the lungs and heart, renders the theory of an excretion of gases from mucous membranes of the intestines exceedingly probable.

I could enumerate from my notebooks numbers of cases in which such an explanation seems the only possible solution of the problem. As a step in the investigation of this subject, it occurred to me that in fishes we had an example of a physiological secretion of gases. The sound or air bladder in

the fish is in some cases not connected in any way with the intestinal tract, although in many it is connected with the esophagus, and in others, as the herring, with the caudal extremity of the stomach. The fact that in many species this connection is entirely absent, and in all cases is but a mere pore, renders it certain that the gases in the so-called air bladder must be obtained from the blood.

Since the cod is supplied with a particularly large sound, which has absolutely no communication with the intestinal tract or gills, I chose it for investigation. The wall for the most part consists of a dense, white, non-vascular, homogeneous membrane, but within the sound at one spot is a lobed, cauliflower-like, vascular organ, which lies free in the cavity of the sound. The function of this organ is apparently that of the secretion or absorption of gases. The next step in the investigation was carefully to collect and analyze the gases obtained from a fresh cod. This was done by means of an aspirating needle attached to an india-rubber bag, similar to those used in the making air balls for children. The result of analysis of two specimens was: Bag 1: oxygen, 12.18 per cent.; nitrogen, 87.82 per cent. In bag 2: oxygen, 17.95 per cent.; nitrogen, 82.05 per cent. If these gases contained carbonic acid gas, it was a mere trace, too small to measure. In his report Mr. Sutton remarked that the atmospheric gases in solution in natural waters contained about 34 per cent. of oxygen, and, on the contrary, in these specimens the proportion of nitrogen to oxygen was greater than in atmospheric air. This most interesting fact concerning gases, the origin of which is without doubt the result of a secretive process from the vessels of the vascular organ within the sound, suggests a series of problems upon which further investigation may throw valuable light.

In the first place, one can at present only speculate on how the presence of such a large proportion of nitrogen is produced, although knowing the small proportion of nitrogen which exists free in the blood of warm-blooded animals, it seems probable that an actual metabolic process must be brought into the play. But we may fairly conclude from these analyses that the presence of a large proportion of nitrogen in the mixture of gases contained in any viscus does not necessarily imply that the origin of that gas is the atmospheric air. If one can argue that what is the case in cold-blooded vertebrata is probably true as regards warm-blooded animals, it seems that we must reconsider our deductions concerning intestinal gases based on the fact of the predominating volume of nitrogen in both gastric and intestinal flatus; in other words, we have no right to assume that when we find nitrogen in about the same proportion as it exists in air, that that nitrogen is the nitrogen of the air and that the other constituents have been altered by the peculiar environment, in the stomach the oxygen being replaced by carbonic acid gas, and in the intestines by hydrogen, carbon-dioxide and marsh gas.

The American Microscopical Society.

The next meeting of the American Microscopical Society will be held in Toledo on Thursday, Friday and Saturday, August 5th, 6th and 7th. The Toledo Microscopical Society have very cordially invited their brethren from other parts of the country to pay them a visit, and have promised to do all in their power to render that visit entertaining and instructive.

Those who attended the gathering at Pittsburgh last year will recall the welcome tendered and the interest manifested by members in the Iron City and their friends, and we trust that all who can do so, will renew the experience by coming to Toledo in 1897.

The officers for the Toledo meeting are as follows:—President, Professor E. W. Claypole, B. A., D. Sc., (Lond.) F. G. S., Buchtel College, Akron, O.; Vice-President, C. C. Mellor, Pittsburgh, Pa.; Secretary, William C. Krauss, M. D., Buffalo, N. Y.; Treasurer, Magnus Pflaum, Pittsburgh, Pa.; Executive Committee, A. A. Young, M. D., Newark, N. Y.; Mrs. S. P. Gage, Ithaca, N. Y.; W. P. Manton, M. D., Detroit, Mich.

The purposes of which the Society exists are as follows:

1. To give to all who are interested in the use of the microscope an opportunity of seeing what others are doing and of showing to others what they themselves are doing. In this way time is saved by avoiding useless experiments and labor is directed into profitable channels. Moreover workers are often enabled to give one another mutual assistance by becoming acquainted with the fields in which their fellow-laborers are engaged,

2. To afford an opportunity for personal acquaintance and intercourse with other microscopists and thus to lessen the sense of isolation which the great size of the country and the fewness of the workers inevitably produces. Acquaintances thus begun at the meetings often ripen into life-

long friendships based on mutual esteem and appreciation.

3. To afford to the microscopist working under difficulties in a country district or in a small education institution an opportunity of seeing the more costly and complicated pieces of apparatus only to be found in the hands of dealers, professors teaching in large or wealthy colleges or specialists in the great cities.

4. To advance the cause of microscopic study among the people living in the district where the meeting is held, and to strengthen the local societies by showing the interest felt in the work outside of their own limits. For this reason the society assembles at a different place each year.

The American Microscopical Society is national in extent and welcomes to membership all who are sufficiently interested in actual microscopic work, or in the results of that work, to enlist in its ranks. No other stipulation is made. It is a band of workers interested in each other's pursuits and willing to give and take whatever aid their union can supply. They do not wish to set themselves on a pinnacle as experts and as specialists, but claim to be merely a small company working for the general good, and they are well aware that the humblest observer may be able to add knowledge and experience that will be of value to all.

The yearly subscription to the American Microscopical Society is two dollars, with an entrance fee of three dollars. In return for this the member receives free, all the published papers of the Society.

The Causes of Sudden Death.

Professor Brouardel, and Professor Dixon Mann (London Lancet) has recently given a very complete account of the cases in which this accident may take place. A very large proportion of the sudden deaths which are met with are, of course, due to one or another form of heart disease. Next comes apoplexy and other cognate diseases of the brain; and in regard to both heart and brain diseases, the frequent association of alcoholism is to be noted. Then there are the causes by which sudden asphyxia may be produced, a somewhat long list which includes many instances in which the obstruction to respiration arises not from any foreign body or morbid growth, but from mere spasm, such as occurs in whooping cough or laryngitis.

A curious cause of sudden death mentioned by Professor Mann, is hæmorrhage into the pancreas. It is most common in stout and alcoholic males over forty years of age, and up to the occurrence of the hæmorrhage the patients may appear in perfect health. People who suffer from enlargement of the spleen also are in constant danger of rupture of that organ, which may be caused by very trivial injuries, as, for example, by a mere pat with the palm of the hand.

Among the causes of rapid, although not generally actually sudden deaths, must be placed the rupture of a gastric or intestinal ulcer, or of an ectopic gestation, and the occurrence of coma from Bright's disease or diabetes. Cases of gastric ulcer may be absolutely devoid of symptoms until the moment when fatal rupture taken place. The same may be said of that very curious group of cases in which patients suffering from certain acute diseases go about until they drop—ambulant cases of pneumonia, typhoid fever, or effusion in the pleura. In pleuritic effusion the danger of sudden death on unaccustomed movement is very great indeed. Yet people go about with a full pleura, and, under such circumstances, the slightest hurry or the most trivial injury may cause immediate death. Pneumonia, again, may exist without preventing the patient from moving about, and such a condition, especially when occurring in old people and in combination with alcholism, is a by no means uncommon cause of death in casual wards and police cells. A case is related of a man, aged 50, who called at a register offce in search of employment, and fell down dead while the clerk was referring to the register, the whole of the upper lobe of the right lung being found on post-mortem examination to be in a state of grey hepatisation.

The liability to sudden death during and after attacks of diphtheria and influenza must always be remembered, and also the fact that, although in some cases a certain softness and flabbiness of the heart muscles may be discovered, in others nothing whatever may be found to account for death.

The association of sudden death with a full stomach is curious and interesting, the actual cause of death generally being the regurgitation of vomited matters into the larynx and trachea. This is especially liable to happen to young children and to profoundly intoxicated persons.

The list of conditions in which sudden death may arise from rupture of cysts or abscesses either into the air passages or into the brain, or from accidents in the course of acute disease is a lone one, but in such

cases a careful post-mortem examination will clear up all doubt.

Finally, mention must be made of the occurrence of sudden death from nervous shock, cases in which no injury has been inflicted during life, and no disease can be discovered after death. In the midst of excitement, or from fright, many apparently healthy people have died; but in regard to this the word excitement must be allowed to have a wider meaning than is usually given to it. Cases are on record in which patients have died during a mere vaginal examination, or during the passage of a catheter, and not a few have died died on the operating table before they have been touched by the knife.

The relation of sudden death to coroners' inquests is a matter of some importance. Whenever a death occurs not only suddenly but unexpectedly, as in many of the cases mentioned, some sort of an inquiry will of caurse be held to ascertain the cause of the disaster. It is to be feared, however, that when sudden death overtakes people suffering from diseases which are recognised as liable to terminate suddenly, a very perfunctory sort of investigation is generally looked upon as sufficient, and it is impossible not to see to what dangers these people are exposed in consequence of the present condition of the law as to certification of death. No official inspection of the body takes place, If a medical man has been attending he is bound by law to give a certificate as to the cause of death, even although he may not feel sure that the patient is dead. Under such a law the sudden death of a person suffering from a disease likely to end suddenly is no bar to a certificate being given, and even if the medical man should refuse to give one, and an inquest should be held, we venture to say that there are not half a dozen coroners in this country who would order a post-mortem examination in a case of sudden death occuring in the progress of a disease of which death is a recognised termination. Thus it happens that those unfortunate persons who are known to be sufferers from such diseases—heart disease, for example—are practically outside the law so far as murder is concerned. We do not say that actual murder often happens, but we do say that the present condition of the law is a direct incentive to it. They are troublesome, wearisome patients to nurse; they involve an enormous amount of labour and self sacrifice upon their poor relatives, and they are in many cases so full of misery and so obviovsly sure to die that it is hard to keep down the thought that they would be better dead. In view of the trival circumstances which appear sometimes to lead to murder, we cannot but see that the temptation to such a crime is comparatively great in cases such as we describe, where the life seems worthless, where its continuance is a trouble to all concerned, where the will is "all right," and the peevish patient is constantly threatening to change it, and where there is a practical certainty that no efficient investigation into the cause of death will ever be made. We cannot but think that this is a matter which demands reform.

Diagnosis and Serum Treatment of Puerperal Fever.

On June the 10th, 1897 Dr, T. W. N. Haultain at the Edinburgh Obstetrical Society read a paper with this title (Lancet, June 26th, 1897). He gave detailed accounts of three cases. The first was a primipara where help was needed in the labour by the application of low forceps. The puerperium for the first ten days was normal, except that the strength was not regained with the usual rapidity. On the twelfth day she fainted on attempting to rise, and for a fortnight her pulse was quick and there was a rise of temperature to about 100 deg. F. On the twenty-sixth day she first complained of severe pain and swelling in the right thigh, this rapidly passed off; four days afterwards pain occurred in the left thigh and calf, associated with considerable swelling and severe constitutional symptoms; vomiting, sweating, and faintness. Dr. Haultain then saw her. Pelvic examination revealed nothing abnormal except a subinvoluted uterus and a slight swelling in the left broad ligament. The lochia were a little offensive, and a culture was made of the discharge from the interior of the cervical canal; one was also made from the blood drawn from the finger. The formea showed a typical pure culture of the Loeffler bacillus; 10 c.c. of the diphtheritic antitoxin were injected with marked beneficial results. On two successive days a similar quantity of serum was injeced as the temperature again slowly rose. After the third dose the temperature fell to normal and she had an uninterrupted recovery. No case of diphtheria was present in the neighborhood and the attending practitioner had not seen a case of diphtheria for some weeks previously, but the drains were found to be in an insanitary state. The second case showed marked signs of fever forty-eight hours after the labour. The medical man had used intra-uterine douches, but without benefit. Dr. Haultain saw her on the fifth day. She then showed signs of marked septic infection, the face

had a leaden appearance, and there were erythematous patches on the abdomen. A culture of the discharge, similarly taken, was again made, and examination showed a mixed growth of streptococcus and bacillus coli. Anti-streptococcic serum (10 c.c.) was injected, followed by a similar quantity the next day, and 30 c.c. on the third day, but no beneficial effect resulted. The patient developed an intractable diarrhœa; her left knee-joint became extremely painful; pulmonary complications and parotitis set in, and she died on the tenth day. A culture was made from the blood of the finger twenty hours before death, and a pure growth of the bacillus coli was found, which from its reactions was found to be extremely active and virulent. The patient was a coachman's wife and was confined in a room immediately above the stable. The third case had been attended by an unskilled woman, and showed signs of fever on the third day. Dr. Haultain saw her four days afterwards. The vaginal discharge was offensive. The culture showed many streptococci. Anti-streptococcic serum (10 c.c.) was injected; the uterus was washed out with a 1 in 40 carbolic lotion and packed with gauze soaked in the antitoxin. On the next day a further 10 c.c. were injected. The temperature fell on both occasions. No further rise of temperature occured, though the cervical discharge showed many streptococci. The uterus was washed out on the two succeeding days, and further examination showed the discharge to be free from septic organisms. On reviewing the cases, the first one was evidently a case of intra-uterine diphtheria, and the diagnosis would have been impossible except for the bacteriological examination. The second case showed features of interest in the presence of mixed infection in the culture from the cervix and in the pure culture of bacillus coli from the blood. Clinically, the violent diarrhœa, the erythematous patches and the absolute inefficiency of the anti-streptococcic serum, were of value. The third case was one of those simple cases of toxin poisoning which usually yield to antiseptic intra-uterine douching, the focus of the disease being thus removed. Still it must be noted that intra-uterine douching had almost no effect until combined with the serum treatment. In all cases of puerperal fever the culture method of diagnosis was much to be preferred to all others. The microscope alone was helpful, but no idea could be obtained of the vitality or virulence of the organisms. In the prognosis, a mixture of germ infection in a case was of serious import as there was then increased virulence. The treatment of these cases could only be scientifically met by previous culture diagnosis to detect which toxin was the main cause of the disease. For preventive treatment Dr. Haultain strongly urged the necessity of using a douch after labour in every case, and recommended 1 in 40 carbolic lotion, which had been found more efficient in experimental research than sublimate lotion.

Aortic Aneurysm Diagnosed by the X Rays.

Avon has published two cases in which he was able to make a diagnosis with the X rays.

(1) A woman, aged 40, was found to have paralysis of the left cord with hoarseness. The examination of the chest yielded no definite evidence of intrathoracic aneurysm or growth. By means of the X rays it was shown that the area corresponding to the cardiac dullness was more extensive than usual in the neighborhood of the third rib in front and the fourth rib behind, A marked pulsation was noted in the shadow behind. This evidence was of greater importance, since the laryngeal palsy had apparently come on after an attack of influenza. (2) The second case, in a man aged 32, was even more conclusive. Five years previously he had contracted syphilis, which was insufficiently treated. This patient had a fibroma of the interarytenoid fold removed some two years ago. Now he came complaining of a slight hæmoptysis, for which no cause could be found in the examination of the chest. A paralysis of the left cord was discovered. No other sign or symptom of aneurysm was present. The X rays revealed a fortnight later a pulsating protuberance from the aorta in the neighborhood of the second rib. This was confirmed by subsequent examinations, and thus the diagnosis was rendered certain. The author draws attention to the importance of the X rays in making an early diagnosis of aneurysm. In respect to etiology, it is known that a previous syphilis plays a part, and hence a suitable treatment will be rendered possible at an earlier date. In the author's second case mercurial inunction was commenced at once, and potassic iodide was given internally. Considerable improvement resulted. The author then discusses the possibility of complete recovery from a thoracic aneurysm. Hitherto the recorded cases of aneurysm in which the X rays have been undoubted examples of the disease, but in the author's cases the diagnosis was previously very uncertain. Thus the X rays should prove to be an extension of our methods of early diagnosis.

Creosote Enemata in the Treatment of Broncho-Pneumonia.

Schoull (British Medical Journal) refers to the favorable results obtained in the year 1892 in the treatment of typhoid fever with grave pulmonary complications from the use of large quantities of creosote given in enemata, and says that in 1894 he observed their efficacy in broncho-pneumonia. He states that since 1893 he has always made use of this mode of treatment, and he unhesitatingly affirms that its action is perfect. He also refers to the results obtained by M. Sezary, of Algiers, who combined this treatment with the use of cold baths in typhoid fever, and found that in his cases the respiratory symptoms were less marked. This fact, says the author, should not be attributed to climatic influence, for even during the mildest period of the year pulmonary complications are frequent in the typhoid fever observed in Africa; he was able to convince himself of this during the four years he lived in Tunis, where he had occasion to attend a considerable number of typhoid-fever patients during several very serious epidemics.

M. Sezary thought that in his cases the creosote had prevented the swarming and the noxious action of the pathogenic microorganisms, and this, the author says, corroborates the results which he himself has obtained with creosote enemata. Quite recently M. Casati found that the internal use of creosote in large doses was a good method of treatment in acute pulmonary inflammation, broncho-pneumonia and fibrinous pneumonia, both in adults and in children. According to him, it exerts an antiseptic action on the pneumococci, and, while stimulating the heart, according to Fernet, it has a manifestly favorable influence on the evolution of the pneumonic process. It is to be hoped, says M. Schoull, that this statement will do more for the adoption of the creosote treatment in broncho-pneumonia than all the efforts of an unpretending provincial physician. He wishes it understood, however, that he does not agree with M. Casati as to the mode of administration, for in these particular cases the doses of creosote must be large in order to be effective, and the stomach does not easily tolerate large doses of creosote; intolerance occurs rapidly and gastric troubles are soon produced. The intestine, on the contrary, shows a remarkable tolerance for this drug, and Revillet was able in this way to administer as much as sixty grains of creosote without provoking any intolerance. The author also has frequently administered thirty grains and more without observing accidents. It is sufficient, he says, to watch the urine, the blackish color of which is one of the first signs of poisoning. Regarding other symptoms of chronic creosote poisoning, they are not to be feared in cases of this kind, as the duration of the treatment is short.

These enemata, according to the author, are easily retained; they also provoke constipation, which, in cases of diarrhœa complicating phlegmasia of the respiratory tracts is, he says, an advantage. If the enemata should not be retained, a few drops of laudanum may be added. The author finds that the simplest and most practical means of administering the creosote is in milk; the amount of creotote for a child under a year is from two to five drops night and morning; for an adult, from thirty to forty and even fifty drops in each enema. The quantity of milk should not exceed an ordinary glassful, in order for it to be retained; this quantity will, of course, vary according to the age of the patient. The enema should be given warm; if it is evacuated immediately or within a short time, it is necessary to give a second one. If no movement has been produced for a day, the intestine should be emptied with an enema of warm water and glycerin.

The creosote treatment, M. Schoull says, is easily tolerated at all ages. He has used it in a child of two months without any inconvenience, also in a woman, ninety-one years of age, who was attacked with the broncho-pneumonia of influenza; in this case the patient recovered and is to-day a vigorous old woman of ninety-three. The effect of this treatment is generally rapid; very frequently in from three to five days, sometimes even more promptly, the stethoscopic symptoms are modified, and the fine râles are replaced by coarser ones, which soon become transformed into simple sibilant râles. The viscous, muco-purulent, and sometimes bloody expectoration loses characteristics and becomes frothy. Respiration becomes freer, the pulse becomes normal, and the temperature is lowered. This, says the author, is no doubt due as much to the diminution of the inflammatory troubles as to the antithermic action of the creosote. Finally, the general symptoms are ameliorated and the appetite returns. The duration of the disease does not exceed two weeks.

The author gives an account of some cases in which he has used this treatment, also the results which he has obtained, and, although the statistics may appear to be astonishing, they are, he says, rigorously exact. From all this he concludes that the

use of creosote enemata is a peculiarly efficacious mode of treatment in broncho-pneumonia; one that is without danger and always easy of application.

Diarrhœas of Children.

On April the 9th, 1897, Dr. Langford Symes read a paper with this title at the Royal Academy of Medicine in Ireland (British Medical Journal, May 8, 1897.) Among the points touched on were—the difference in the digestive juices in the child as compared with adults, the digestion of milk by infants in the intestine, the inability of young children to digest starch, the large class of cases of diarrhœa that were "dyspeptic," and the second great division of infantile diarrhœas which might be termed "infective." Defective water supply appeared to affect the older children, over 5 years of age, but infants were swept away in hundreds by milk which was infected or contaminated. The greater number of fatal diarrhœas were doubtless due to artificial feeding. In Manchester, Dr. Niven's returns were of great value; 97 per cent. appeared to have been hand-fed. This exact percentage was also found to be the rule in America, and Bavaria returned 96 per cent. All organisms grew and flourished in milk. The varieties of infantile diarrhœa were shown to have been greatly confounded in past years. Only lately was more light being thrown on these points. Dr. Symes approved of primarily two main varieties—namely, "Dyspeptic" and "Infective." The first might be acute or chronic, the second mild or violent. Thus four sub-classes existed altogether: I. "Dyspeptic"; (1) Simple diarrhœa; (2) Chronic diarrhœa. II. "Infective": (1) Summer diarrhœ; (2) Cholera infantum. Obscure anatomical or pathological names had no foundation—in fact, no reality—in the *post mortem* room. Such names as enterocolitis, catarrhal enteritis, muco-enteritis, gastro-intestinal catarrh, were misleading, and could not be borne out by facts. There was, however, no sharp line of demarcation between these several forms, as they were extreme types, and numerous intermediate grades of severity were met with; but these were the main varieties to be recognized. Dr. Symes considered, in the absence of any antitoxin or specific remedy for the infective forms that almost all cases could be managed under the following indications, varied as the case demanded; but, unfortunately, in the severe infective diarrhœas these did not avail much, as cholera infantum still was the most fatal form or diarrhœa known: 1. General management. 2. Removal of irritating particles from the bowel. 3. Diet. 4. Antiseptics to arrest fermentation. 5. Irrigation of the bowel. 6. Sedatives to allay peristalsis. 7. Restoratives in case of collapse. The prevention of all these diarrhœas could be reduced to three lines of action: 1. Scientific regulation of artificial feeding. 2. Purification of the ground. 3. Purification of milk.

Fish as a Diet.

Sir Henry Thompson discusses this subject very interestingly (Dietetic and Hygienic Gazette.) He holds, and very reasonably, too, that the sedentary man, whatever his calling in life, whose engagements permit him only to take just that moderate amount of muscular exercise which is in all circumstances essential to health; for a great proportion of women whose habits mostly are not, and often can not be, active, the nutritive elements afforded by fish admirably apply an important part of the wants of the body. The moderate amount of flesh forming material present in fish, and in a form which entails little labor on the digestive organs (for most persons certainly eat less than meat), and the facility with which fish may be associated with other elements (some fatty matters, with cereals and vegetables, as well as fruits) place it in the first rank of foods in that mixed dietary which is suitable to those who lead more or less the kind of life referred to. He does not say that it should supersede the use of meat altogether, although it may do so sometimes without advantage—a point only to be determined in each individual instance after some observation and experiment. For in all cases it is to be remembered that no man who has habitually eaten meat two or three times daily can at once exchange it for fish and cereals and vegetables without some discomfort, to say the least. All radical changes in diet, even in the right direction, require to be gradually made; the stomach conforms slowly, when long accustomed to deal with highly nitrogenized animal food, to the task of deriving from unaccustomed materials the support necessary to the body. Given time for such modification of function, and it is remarkable—at least it appears so to those who have not practically studied the subject—that a diet which, if adopted suddenly, might be equivalent to semi-starvation, may by degrees become the most healthful and nutritious which the individual can adopt.

Medical College of Virginia.

For some years past many of the young men of the Southern States have been obtaining their medical education at Northern colleges. This custom is now becoming far less common, and it seems as if the next few years will witness its rapid decadence. Medical science has taken wonderful strides during the past twenty-five years, and our Southern institutions have, perhaps, been somewhat slow in appreciating the fact that this completely revolutionized the methods of teaching.

That our colleges have awakened to a realization of this fact is shown by the work of the Medical College of Virginia (Richmond, Va.) This institution was among the first of the Southern medical colleges to adopt a three-years' course. During the past few years a thoroughly modern hospital (the Old Dominion) has been established; a new dispensary, and chemical, bacteriological, and pathological laboratories have been equipped, and, still more recently, dental and pharmaceutical departments have been established. The increased patronage which has been the natural outcome of these progressive moves has made it necessary to add new lecture-rooms and a larger dissecting-hall for the ensuing session. Plans are now on foot for the establishment of an obstetrical hospital in the near future.

These additions to her already excellent equipment place the Medical College of Virginia on a level with the best medical colleges in this Country. With such an institution within her own borders there is no reason who the young men of the South should seek their medical educations beyond the confines of their own section of the country.

Tuberculosis of the Salivary Glands.

Valude (Edenburgh Medical Journal) states that this is a very unusual disease, but easily produced experimentally by inoculation with tuberculosis cultures. He made ninety inoculations in the salivary glands of rabbits with pure cultures of different degrees of activity, sixty-elght of which gave positive, and twenty-two negative results. He attributed to the mixed saliva, which was formed of the three principal salivas, such as chemical properties that Koch's bacillus could not thrive or even live in it. He acknowledged, however, that the value of this theory was entirely hypothetical, and he preferred to consider the antagonism of the micro-organisms of the mouth as a cause of the death of Koch's bacilli; so that all local inoculation became very difficult, and the buccal mucous membrane and the salivary glands were spared. Conheim, on the contrary, hesitated to express himself so positively, and questioned whether all the so-called scrofulas of the lips, the mouth, and the throat, and the caseification of the ganglia of the neck were not due to an immediate application of the tuberculosis virus in the food. At all events, it has been shown that a number of cases of intestinal, mesenteric, and peritoneal tuberculosis, especially in children, have been due to tainted food, and particularly to tuberculous milk. The author says in regard to the action of the mixed salivas, that it may be asked why this saliva—which, after all, does not differ greatly from the three separate salivas—exercises such an energetic influence on Koch's elements, when each one of its parts has no action at all on the elements, as has certainly been proved by Valude's experiments. The author gives an account of two cases of what seems to him to be very distinct tuberculosis of the submaxillary glands. From a clinical point of view, he thinks they are absolutely indisputable, and he thinks that the results show that tuberculosis of the salivary glands, which may be produced experimentally, exists also clinically.

Influence of Cold Baths in Delirium Tremens.

Littule, according to the Medical News, recommends as a sedative in delirium tremens a cold bath of 65 deg. F., the patient being immersed in the water to his shoulders, while water of the same temperature is poured over his head. In a severe case in which large doses of morphin subcutaneously and chloral by the mouth had failed to give sleep in two days, and death was expected, a bath of the temperature of 65 deg. F. increased in the first three minutes cyonosis and excitement. In six minutes the aspect of the patient completely changed. His excitement disappeared, he seemed to awake from a dream, asked where he was, drank eagerly two glasses of warm wine, and wanted to sleep. He was placed in bed and immediately fell asleep. The following day, on account of recurring excitement, it was necessary to repeat the bath four times. There was no further delirium and the patient recovered. In a second case it was necessary to leave the patient twelve minutes in the bath, when as suddenly as before there was quiet, thirst, and a desire for sleep, followed by complete recovery in two or three weeks.

The Non-Operative Treatment of Phimosis in Infancy.

Dr. J. L. Morse in the American Journal of Obstetrics and Gyncol., says:

The two common congenital malformation of the male genitals are adherent prepuce and phimosis. Adherent prepuce is so common, however, that it may be considered as almost on the border-line of the physiological, the more so from the fact that the adhesions, which are usually few and small, almost invariably disappear as the child grows older. Phimosis is the condition in which the prepuce is so narrowed that it can not be retracted over the glans. It varies greatly in degree, in some cases there being no opening at all, while in others it is only a pin-hole. In most cases, however, a part of the glans is visible. When the prepuce is also elongated, the condition is called hypertrophic phimosis. All degrees of phimosis may be complicated by adherence of the prepuce. Often the preputial orifice is very small, there is difficulty in passing urine, and as the result of straining, umbilical or inguinal hernia, prolapsus ani and hydrocele may be produced. The retained secretions may cause irritation, posthitis and balanitis. These cause frequent and painful micturition; retention and priapism, and not infrequently lead to masturbation. Various secondary reflex nervous disturbances may also result from the local irritation. The most common of these are nocturnal incontinence, insomnia and night terrors, but in rare instances convulsions may be caused.

In the light of the possible consequences of the condition, it seems self evident that all cases of phimosis should receive early treatment. This treatment should be continued until the prepuce can be easily retracted and the glans kept clean, for in this way only can relief from the local and reflex symptoms be obtained. The three methods for attaining complete retraction of the prepuce are dilatation, incision and circumcision. Of these, the latter is, of course, the most radical. The advisability of removing the natural protection of the glans penis, unless it is absolutely unavoidable, must, however, be considered as at least questionable. I feel, moreover, that it is necessary, except in certain cases of hypertrophic phimosis, and that equally satisfactory and lasting results may be obtained from gradual dilatation. By the exercise of a little time and patience, even the tightest strictures may be over come, as the young tissues are very distensible, and readily adapt themselves to new conditions. Many of the milder forms may be relieved by simply pulling the foreskin back with the fingers, and breaking down the adhesions, if they exist, with a probe or a director. Even in these cases, however, it is advisable not to complete the procedure at one time, but to do it gradually. In cases in which the phimosis is more marked, the first step is to thoroughly dilate the opening. This I do by introducing into it the point of ordinary dressing forceps, and allowing them to dilate it by their alasticity. Several sittings, best on successive days, are often necessary to accomplish this.

The prepuce is then gradually retracted over the glans, and the adhesion broken up, as in the milder cases. Care must be taken not to produce a paraphimosis the first few times that the prepuce is completely retracted. The mother then pulls back the foreskin daily in order to prevent possible recontraction. Cleanliness is, of course, essential both during and after treatment. Almost all cases of phimosis, except those in which the prepuce is very long, can be satisfactorily treated by this method, and the field for surgical interference is thus restricted to this class of cases alone.

The advantages of gradual dilatation are the attainment of equally as satisfactory results as by more severe methods, the avoidance of surgical operation, and the retention of the natural protection of the glans penis.

Chronic Rheumatism and its Treatment.

Professor Baumler says: Properly speaking, only the chronic form of polyarticular rheumatism should have this name, whilst the other monarticular forms caused by mechanical injuries, gonorrhœa, &c., should be distinguished as traumatic arthritis, genorrhœal arthritis, &c. The so-called "arthritis deformans" is only a progressive and advanced form of chronic polyarticular rheumatism- The etiology of the disease remains very obscure; atmospheric influence undoubtedly is of great importance, though this is denied by some physicians. The term "arthritis pauperum" is a misnomer, as the disease is not confined to the poor, but is frequent in well-to-do people also. Women are more easily affected than men; Dr. Ord has therefore suggested that the disease may be due to reflex irritation originating in the reproductive organs, but an infection originating in these organs and propagated from them into the joints would be a more probable explanation. Several physicians have shggested, chiefly on bacteriological grounds, that rheumatic poly-

arthritis might be an infectious disease; in 1892 Schuller discovered a bacillus in the arthritic joints; in 1894 Bannatyne and Wohlmann found a bacillus in the fluid obtained by puncturing a joint; and Blaxall has even succeeded in cultivating the bacillus.—Professor Ott (Prague) pointed out that any acute inflammation of the joints should at the outset be treated in an antiphlogistic way. The patient should stay in bed, the joints should be kept motionless, and opiates and salicylate compounds should be given. When the acute symptoms have disappeared baths are very useful. Ordinary baths are indicated when nervous irritability accompanies the affection of the joints, the water of saline and sulphurous springs is to be preferred in other cases, whilst mud baths prove useful in more torpid forms. Sand baths and Russian baths, although useful for robust persons, must not be employed for delicate or anæmic patients, Massage, electricity, and mechanical exercises are of great use in ankylosis. The general state of the patient should never be neglected, and a nourishing diet, together with iron and other roborant medicines, should be prescribed in chronic cases.

The Use of Opium in the Diarrheal Diseases of Children.

The current edition of Pediatrics contains a very interesting editorial with the above heading.

In no other condition is so much discrimination demanded in prescribing opium as in the diarrheal diseases of infants and young children. Much opposition to its use has been elicited during recent years, and many physicians have discarded it entirely. Much of this opposition is, unquestionably, well founded. While its improper use may do great harm, when properly used, it is an agent too potent for good to be wholly abandoned. We had occasion some time since to present in brief form its indications and contra-inditions in diarrhea as follows:

It is contra-indicated—1, in the first stages of acute diarrhea, before the intestinal canal has been from decomposing matter; 2, when the passages are infrequent and of bad odor; 3, where there is a high temperature or cerebral symptoms are present; 4, when its use is followed by elevation of temperature or the passages become more offensive—symptoms which indicate tonic infection from putrefying intestinal contents.

It is indicated—1, when the passages are frequent, with pain; 2, when the passages are large and watery; 3, in dysenteric diarrhea, together with castor oil or a saline; 4, in late stages, with small, frequent, nagging passages; 5, when the passages consist largely of undigested food, and the bowels act as soon as food is taken into the stomach.

The most important contra-indications are admirably described by Dr. Miller. In the cases he reports, the dangerous symptoms were, no doubt, due to the absorption of tonic principles generated in the intestinal canal. The locking up of such putrefying matter by the use of opium violated every right principle of practice. Diarrhea would have been a conservative process, and frequent movements should have been encouraged. He clearly shows the reason for possible bad results in the following sentence: "Opium arrests the intestinal movements, and prevents the elimination of these toxic materials, and may give rise to grave symptoms of intoxication and sepsis."

The dose should be as small as possible, sufficient being given to relieve pain and check peristalsis. It should not be added to the ordinary diarrhea mixture, to be repeated at short intervals. It should be given alone, and at intervals sufficient to allow the effect of one dose to partially subside before another is given. This interval will be rarely less than four hours.

Graves's Disease.

Professor Eulenburg, at the German Congress of International Medicine, pointed out that the three leading symptoms of Graves's disease—thyroid enlargement, exophthalmos and cardiac palpitation—have been supplemented in the course of time by a series of other phenomena. He mentioned specially the ophthalmic conditions described by Graefe, Stellwag and Moebius, the so-called Marie's tremor, the diminished resistance to galvanic currents observed by Charcot, Vigouroux and himself, the special glycosuria discovered by Chvostek, and finally all those neurasthenic and hysteric troubles which are so characteristic of this affection. Not every one of those symptoms is present in each instance of Graves's disease. There are cases where some one or the other of them is but little developed or disappears during the course of the disease. Three etiological theories of Graves's disease have been advanced—hæmatogenic, the neurogenic and the thyreogenic. The first-mentioned is based on the prevalence of the disease among females, its commencement during adolescence, its connection with dysmenorrhœa and the beneficial effect of pregnancy observed in

some instances. Discussing the neurogenic theory Professor Eulenburg said that all attempts to localize the affection in either the vagus or the sympathetic nerve have been unsuccessful, for its clinical symptoms, its development after severe injury and its connexion with other constitutional neuroses, such as an epilepsy, hemicrania, chorea and diabetes, prove that the disease is a constitutional neurosis. Gauthier was the first to suggest an alteration of the chemical composition of the thyroid gland as a cause of Graves's disease, and Moebius drew attention to the contrast between its symptoms and those of myxœdema. Tachycardia, exophthalmos, mental excitement and emaciation were caused apparently by hypertrophy, and slowness of the pulse, mental apathy and obesity by atrophy of the thyroid gland. The gland undergoes alteration in function as well as in size, and it probably produces a toxic substance which acts on all the parts of the nervous system. On the subject of treatment Professor Eulenburg said that the hæmatogenic theory required the administration of remedies directed against anæmia and chlorosis, whilst the neurogenic theory suggested the use of electrical, psychical, dietetic, climatic and hydropathic methods. The supporters of the modern thyreogenic theory have recommended thyroidectomy combined with the internal use of thoroid preparations, but this oderation should be reversed for cases where the local symptoms preponderate, and it is found that general treatment gives very favorable results with many patients.

Malignant Endometritis.

Dr. J. M. Van Cott (International Medical Magazine.) The microscope alone will not enable one to make an accurate diagnosis of this form of malignancy in the uterus. Much may be determined regarding hyperplasia, rapidity of cell proliferation and the presence or absence of adenoma, but it is utterly impossible to tell simply from the tissue removed by the curet how deeply the process has advaced into the substance of the uterus; at least, one can only have a strong suspicion that a process, which will prove fatal long before the characters are unmistakable, is present. If, in addition to the microscopic appearance, the patient gives a history of frequent metrorrhagia, unrelieved by repeated curetting, with rather a watery discharge between, you can safely make a diagnosis of malignant chronic endometritis.

As regards operation, it is better to err on the safe side and remove the uretus, if one is in doubt, as it is a greater error to leave a uretus *in situ* when it is the seat of malignant endometritis, than to remove one of which you are suspicious, yet which proves to contain nothing of a malignant character.

The condition must be compararatively rare, as the writer had only come across six cases in six years' work in the pathological departments of three Philadelphia hospitals. He gives the following report of a case, but it is too incomplete to be of much value: She was short, rather enemic and very stout with flabby tissue. There was a history of profuse metrorrhagia during the previous five years, increasing in amount and duration and with shortened intervals. Repeated curettage was followed by recurrence of the metrorrhagia and a profuse muco-serous discharge ex-utero. On microscopically examining the tissue removed by the curet after two operations, an apparently simple hyperplasia of the glandular tissue was seen, but malignant hyperplastic endometritis was diagnosed and hysterectomy performed. On removal of the uterus, it was seen to be enlarged and globular with a relatively short cervix. The peritoneal coat was smooth, glistening and hyperemic, while the organ itself felt soft and elastic. The cut section is rough and looks hyperemic, especially near the endometrium, which is engorged with blood and hemorrhagic spots. The endometrium is soft, velvety and about one-quarter of an inch thick. Sections examined by the microscope show neither adenoma, carcinoma or sarcoma, but a glandular hyperplasia with a tendency of the glands to grow out into the intermuscular spaces of the metrium. The matrix of the endometrium can be seen deep in the muscular of the uterus.

Hairy Nævus Treated by Means of X Rays.

Leopold Freund (Edinburgh Medical Journal) has been induced by the cases of dermatitis with the loss of hair resulting from the use of the Roentgen rays, to attempt the treatment of nævus pilaris by means of the discharge through a vacuum tube. The patient was a girl, aged 5, suffering from a hairy and pigmented nævus, reaching from the nape of the neck, down almost to the fold of the nates, and extending over the whole back, the sides of the thorax, the shoulders, and the upper half of the right arm. There were a large number of smaller nævi in various parts of the body. Treatment consisted in the use of the rays from a vacuum tube through which

the current from a Rúhmkorf's coil with a 10-inch spark was passed. The child's back was exposed to the rays for two hours every morning at a distance of four inches from the tube, the kathode rays being employed. For ten days no effect was produced, but on the eleventh a few hairs began to fall out in bundles, and this continued to an increasing extent for eight days, when a slight dermatitis appeared, which soon yielded under the use of ichthyol. By this time the neck and interscadular space had become quite bald. The day before the hair began to come out the nævus was, by an oversight, exposed for about twenty minutes to purely anodal rays. To ascertain if this was the cause of the phenomenon, the first line of treatment was stopped, and the part of the nævus on the right arm exposed daily for twelve days to the anode rays; no epilation, however, resulted. To find out whether the therapeutical action was due to the X rays or simply to electrical waves, a third part of the nævus was exposed to the former alone, a thin screen of cardboard covered with aluminum foil and connected with the water tap being used to insulate it entirely from electrical influence. In ten to fourteen days the part exposed had been rendered completely bald. It was noticed that the thin, fine, normal hairs were always more readily affected than the strong, short hairs of the nævus; further, that the action of the rays was slow in commencing, but when once established appeared to be cumulative. The actual cause of the falling out of the hairs appears to have been a slight inflammatory change, followed by atrophy of the follicles. No attempt at regeneration had taken place within six weeks, but this was of course too short a time for a final conclusion.

New Appointments and Changes in Bellevue's Iodide and Syphilitic Blood.

Colombini and Ferrilli (The Medical Times and Hospital Gazette) have been working at the Dermato-Syphilitic Institute in Siena at the action of iodide of potassium on the blood of syphilitics. They find that, given by the stomach before any other drug and in the early stages of syphilitic infection, iodide of potassium causes an increase in the number of red corpuscles and in the quantity of hæmoglobin. If the administration is continued, sometimes a diminution of the red corpuscles, followed by a progressive and continuous increase, occurs. Sometimes the increase is continuous, and not interrupted by a decrease. When the iodide is stopped, the red corpuscles and hæmoglobin tend at first to diminish, but afterwards start afresh to increase. At the same time there is a notable and constant increase in body-weight. The authors attribute the beneficial results of treatment to a specific action of the iodide upon the syphilitic virus. They believe that iodide of potassium in moderate doses, and over a moderate time, is the best remedy for the severe forms of chloro-anæmia due to syphilis. A parallel series of experiments in the blood of healthy subjects showed that under iodide of potassium there was constant diminution of hæmoglobin and of red blood corpuscles. The white corpuscles adpeared unaffected. The body-weight decreased, especially when the dose of iodide of potassium was progressively increased.

Faculty.

We learn from the Medical News that the following new appointments have been made in the Faculty of Bellevue: Dr. Charles L. Dana, Professor of Diseases of the Nervous System; Dr. Henry C. Coe, Clinical Professor of Gynecology; Dr. Henry H. Rusby, Professor of Materia Medica and Pharmacology; Dr. John A. Mandel, Adjunct Professor of Physiological Chemistry; Dr. William H. Park, Lecturer on Bacteriology and Hygiene; Dr. George D. Stewart, Professor of Anatomy; Dr. Austin Flint, Jr., Professor of Obstetrics and Clinical Midwifery; Dr. Herman M. Biggs, Professor of Therapeutics and Clinical Medicine and Adjunct Professor of Principles and Practice of Medicine. Dr. Joseph D. Bryant has given up the Chair of Anatomy and has been appointed Professor of the Practice of Surgery and of Operative and Clinical Surgery. Dr. Reginald H. Sayre has been appointed Lecturer on Orthopedic Surgery. Dr. Carlos F. McDonald has had the department of Medical Jurisprudence assigned to him in addition to the Professorship of Mental Diseases. Dr. D. Hunter McAlpin, Jr., has been promoted to Professor of Gross Pathology and Clinical Registrar.

The New Orleans Medical and Surgical Journal.

This excellent Journal has completed the fiftieth year of its useful and successful career. A copy of the last issue is before us. It shows a wonderful degree of proficiency, both in its editorial and mechanical dedartments. We heartily congratulate our contemporary and wish it continued success.

Etiological Therapeutics.

At the German Congress of Internal Medicine Professor Behring said (Lancet July 3, 1897) that the treatment of disease with drugs had failed because it was based on experiments made on healthy animals. Allopaths err when they endeavour to correct symptoms, and their theory "*contraria contrariis*" is not more reasonable than the "*similia similibus*" of the homœopaths. Cellular pathology has proved useless as far as therapeutics are concerned. Natural therapeutic processes include—(1) phagocytosis; (2) removal of the virus by the perspiration, the urine, and the fæces, and (3) the protection afforded by the epidermis and the epithelium. Etiological therapeutics are based upon the circumstance that the animal organism, when invaded by certain kinds of pathogenic virus, has the power of forming antidotes which not ouly render the particular individual immune against such virus, but are also available for administration to other individuals. The antitoxic power present in the organism of highly immunised animals is specially concentrated in the blood serum. The antitoxins hitherto discovered are not all of similar efficacy. Diphtheria antitoxin has been clearly proved to be successful, but tetanus antitoxin sometimes fails, owing to the fact that it is not usually kept in hospitals and consequently is not at hand for sufficiently early administration. Marmorek's anti-streptococcic serum is very doubtful, whilst Maragliano's tuberculosis serum contains no antitoxin at all. The antitoxins themselves are innocuous, and the removal of the causes of such undesirable symptoms as urticaria, &c., is a mere matter of improving the practical details ot the manufacture. All attempts to produce a chemically pure antitoxin have failed, and must necessarily do so, owing to the fact that antitoxin is not a definite chemical compound, but is rather a quality inherent in certain albuminous substances, somewhat as magnetism is in iron. Passive immunisation by means of antitoxin is preferable to active immunisation by direct toxins. Experiments are at present being made in the hope of discovering a method of prolonging the immunising power of antitoxins. When the virus of the disease is unknown, as in the case of septicæmia, the production of antitoxin is impracticable. Professor Behring finally announced that he was carrying on researches with the view of discovering a new anti-tuberculous serum. Alluding to Professor Koch's new tuberculin, he declared it to be very valuable for the lower animals—in fact, more suitable for them than for the human subject. In concluding his address Professor Behring remarked that the prophecy that bacteriology would have no application or utility in the practice of medicine had been disproved by the introduction of the antitoxin treatment.

When Shall We Use the Forceps?

Dr. Wm. E. Parke has a very interesting article in the February issue of the American Gynecological and Obstetrical Journal, in which he presents the following summary:

1. The indication for the use of the forceps rarely arises during the first stage of labor, before the membranes have been ruptured.

2. It may be necessary to employ the forceps during the first stage, when the waters have escaped, on account of the increasing exhaustion of the mother or child.

3. It is proper to apply the forceps during the first stage of labor for accidents, whenever they may arise, notably in certain cases of convulsions, placenta previa and prolapse of the cord.

4. In the second stage it is proper to apply the forceps one half hour after the head ceases to advance, when there is no disproportion between the passage and passenger.

5. When, however, there is a tight fit between the child and the birth-canal, the use of the forceps may be delayed. This delay should rarely exceed two hours after the head ceases to advance.

6. If the head is engaged, and neither advances with a pain nor recedes after the pain, the forceps should be applied promptly.

Is Cancer of Female Organs Ever Transmitted to the Male?

Dr. Volovsky discussed the question of conjugal inoculation of cancer before the Medical and Chirurgical Society of St. Petersburg, (Lancet.) A case which he related was faulty, as evidence. A woman underwent operation many years ago for cancer of the posterior vaginal fornix. She recovered, and there was no recurrence of this alleged cancer. A year after the operation, this woman's husband suffered from cancer of the prepuce, and died after operation. File, in discussing Volovsky's case, quoted another in his own experience, where a man contracted, as he termed it, cancer of the prepuce from genital cancer in his wife. File knew of a case of a woman who died of cancer (no mention is made of the affected part); when in hos-

pital she was supplied with dainties which she would only just taste, giving them to her husband, who ate them up. He, a month later, developed cancer of the face. As usual, the evidence of transmission of cancer, after the fashion of syphilis, was not established by this discussion; Volovsky's man seems to have become cancerous a year after his wife had been freed from a disease which may not have been a cancer. File's first case is insufficiently reported, his second is worthless, and neither of the two Russian surgeons made any mention of the possibility of coincidence.

Diagnostic Points in Diseases of Children.

Dr. J. Lewis Smith says (Pacific Journal of Home.)

"Lividity of the skin, induced by exertion or excitement, while the respiration is normal, indicates malformation, or diseases of the heart or vessels.

Lividity, whether temporary or permanent, is a sign of imperfect decarbonization of the blood.

Transient circumscribed congestion of the face, ears or forehead, is a most reliable sign of brain disease.

A permanent downward direction of the axis of the eyes, with smallness of the face and great expansion of the cranium, is a sign of congenital hydrocephalus.

Absence of tears in infants over four months of age, during the act of crying, indicates a severe and probably fatal form of disease.

Young children do not shake when they have chill, but have a pallor or lividity of the skin, lips, and nails.

Bulbous enlargements of the fingers and incurvation of the nails are signs of cyanosis, and, therefore of malformation at the centre of the circulatory apparatus, or of tuberculosis, or chronic pulmonary disease attended by malnutrition.

Enlargement of the spongy portions of bones, causing prominence, softness, and bending of the bones; an open condition of the fontanelles, a large square shaped head, and delayed dentition indicate rachitis.

A thick Meibomian secretion of a puriform appearance collecting between the eyelids, is an unfavorable prognostic sign. It indicates a state of great depression. It is observed more frequently in cerebral and intestinal diseases shortly before death.

There is often a hyperesthetic condition of the skin with certain acute, febrile and inflammatory affections. The hyperesthesia is more often found on the anterior surface of the trunk. This condition is often misleading to the physician, leading him to think that the hyperesthetic pain is of an inflammatory nature. The pain of hyperesthesia can be readily diagnosed from that of inflammation by the fact that it is so extensive, is less severe on firm pressure than on light, and is especially observed on the inner surface of the thighs.

Placenta Praevia Adherent to Fibroid

Maygrier in the London Lancet publishes full notes of a bad case of placenta prævia. The patient, in the eighth month of pregnancy, was brought into hospital already exhausted by profuse hæmorrhage. A dead child was extracted by version. The detachment of the placenta offered extraordinary difficulties. Maygrier was fairly puzzled by a soft mass which he detected on introducing his hand into the uterine cavity. It was very resistant notwithstanding its softness, and the process of separation of the intimately adherent border of the placenta fatigued him so that the midwife had to conclude the process as far as was possible. In spite of subcutaneous injections of ether and intravenous injections of serum, the woman died an hour and a half after delivery. The uterus was removed after death. A tumour was found occupying the posterior and left aspect of the lower segment of the uterus, nearly reaching the os. It measured 6 inches in its longest diameter, and was a pure fibroma, very soft, yet being made up of very resistant white fibres. The placenta, altered by disease, was closely incorporated with its lower surface. Thus was explained the fatal complication in a condition always perilous during parturition.

Sanmetto in Gonorrhea.

A bottle of Sarmetto enabled me to discharge the patient I was treating, entirely cured. Since then I have had a crop of cases of gonorrhea, such as often explodes in our midst in the form of an epidemic. In the chronic form of gonorrhea, ending in chronic cystitis and urethritis, involving the prostate gland and lymphatics, with backache, malaise and painful micturition, I think I can say with impartiality that I know of no medicine conserving the purpose of bridging over these troubles like Sanmetto: and I know of no class of troubles which annoy physicians more. In all such cases I would say, put the patients on Sanmetto, and if they do not improve, I will give it up. Sanmetto is invaluable in such cases.

J. C. Roberts, M. D.

Pulaski, Tenn.

Traumatic Cerebral Abscess.

Oppenheim says the Hospital in dealing with the subject of the differential diagnosis of cerebral abscess points out that they have to be distinguished from (1) traumatic meningitis, (2) traumatic apoplexy, especially when this ensues some time after the accident, (3) traumatic encephalitis, (4) tumours of traumatic origin, (5) traumatic epilepsy, and (6) traumatic neurosis. Among the practical points to which he calls attention is the fact that in a certain proportion of cases distinct clinical evidence of cerebral hæmorrhage following an injury may not be present for some time after the accident. In one case of his own the symptions did not appear for twenty days after the infliction of the injury. A very difficult diagnosis is that between late traumatic abscess and meningeal hæmorrhage followed by scar or cyst formation. The only certain signs are those peculiar to the onset of cerebral suppuration. A distinction must be made between suppurative and non-suppurative traumatic encephalitis. Traumatic hystero-neurasthenia is characterised by the absence of signs of increased intra-cranial tension. and the fact that the irritative or paralytic symptoms are usually on the same side as the injury. Friedman refers to a condition which sometimes follows head injuries—headache, vertigo, vaso-motor disturbances, loss of consciousness, with, sometimes, fever and irritability. This group of symptoms is due to minute pathological changes in the capillaries and arterioles of the brain. The writer has met with a case in which fatal tuberculous meningitis simulated traumatic cerebral abscess.

Typhoid Fever.

Professor Wright's substitution of dead for living cultures is one of immense practical value in the serum test for typhoid fever.

When living cultures are used the test is inapplicable unless there is a laboratory at hand and growing cultures ready, but the dead cultures can be kept sealed up in capsules or sent by post. He finds, in fact, that emulsions of fresh agar cultures killed by exposure to a temperature of 60 degrees C. for five or ten minutes, sealed, and kept for some weeks, react with typhoid serum just as well as living ones, becoming "clumped," or in Wright's tubes giving a floccular sedimentation quite distinct from the fine granular deposit of dead bacteria which occurs without the addition of serum. The latter test can be observed without a microscope, so that the whole apparatus is reduced to a supply of capsules of dead cultures, glass tubeing and a blow-pipe for making it into capillary tubes. For the blow-pipe an ether spray filled with methylated spirit and lighted will suffice.

Idiopathic Hypertrophy of Cervix.

Moller, in the London Lancet, reports 5 cases of elongated cervix. In 4 the patient had borne children. The fifth was a virgin aged 18. She had menstruated normally from the beginning of her 17th year (she was a Finn, a race in which puberty begins late). Leucorrhœa had set in when she was 15. When laid up with a feverish attack six months before treatment she detected something projecting from the vulva. Engstrom found retroflexion, and the vaginal part of the cervix was greatly elongated, projecting three-quarters of an inch out of the vagina. It was soft and not œdematous, The uterine body was of the usual length, the fornices at their ordinary level, nor was there any prolapse of the vaginal walls. The hymen was intact. The elongated cervix was amputated by the Simon-Marckwald method. After recovery the uterus became anteflexed, as in most virgins. Moller believes that this was a case of Huguier's idiopathic hypertrophy. The usual external causes, gestation, self-abuse, chronic metritis, and injury were absent. He thinks that the elongation was most probably congenital. He is not even satisfied that it might not have been congenital in one or more of the other 4 cases.

Doctors of United States Invited to Stay Away From British Medical Association Meeting in Montreal.

According to the Cleveland Journal of Medicine the local committee of arragements for the Montreal meeting of the British Medical Association has gone so far as to sendout letters begging the physicians of the United States to stay away from that meeting in August and September, on the pretext that so large an attendance (not more than two or three hundred would have attended any way) would interfere seriously with the scientific programme. "No doubt the somewhat palpable ill-breeding of the Montreal committee will be successful in keeding self-respecting American physicians in the confines of their own country next August. It is a pity that so good an opportunity for the intermingling of the British and American professions should be thus lost through Canadian lack of courtesy."

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A Further Communication Concerning Eucaine "B."†

The number of the favorable reports upon Eucaine A duringthe last few months have been very great. Disadvantageous features have rarely been noticed. Amongst the least laudatory reports we may mention those of Vollert (1),Best (2), and Winterfeld (3); and they perhaps would not have appeared if these investigators had not used such concentrated solutions of the drug. It is possible also that the purity of the Eucaine A may not have been above cavil. I believe this latter to be the case for the lowing reasons:

Dr. Vinci entered the polyclinic of Gehiemrath Professor Schweigger about a year ago, and, with his permission, entered, in conjunction with myself,upon the investigations,which included observations upon eyes effected with the most varied diseases. My independent investigations enabled me to inform him that Eucaine A was very useful and fully equal to cocaine. A solution that I received from elsewhere later, and which was labelled Eucaine A, I was compelled to reject, for it caused severe pain in the lids and great reddening in the conjunctiva. This fact is mentioned in my article (4). I am somewhat at odds with Dr. Vinci as to the explanation of the phenomena obsersed with him.

The same care and zeal was observed in both sets of cases and the clinical material was not different; and I therefore conclude that the solutions of Eucaine "A" were not alike, that one of them was perhaps not free from acids or other impurities. Dr. Vinci is certainly right when he reports that the results obtained at the clinic were good ones. And I do not attempt to deny the occurrence of the unpleasant phenomena that appeared after the employment of the solution that we were using later. I am now in a position to report further good results with Eucaine "*B*." For the last two and a half months it has been used by Professor Schweigger in eye operations of the most varied kinds, including 48 senile cataracts, and with perfect satisfaction.

The anaesthetic was complete, the vascular injection moderate. Corneal opacities did not appear; but it is important not to make the instillation too long before the time of operation. Four drops are sufficient, instilled five minutes before commencing work. Repeated and lengthy installations of the 2% solution that is usually employed cause a considerable injection of the conjunctival vessels, and on section of the conjunctiva, the abnormal homorrhage may interfere with our sight of the field of operation. It is not yet decided whether the hyperaemia exercises any favorable influence upon the healing of the wound. Mollinger attributes to the cocaine anaemia an unfavorable effect in this respect.

When for any reason it becomes necessary to anaesthetize the iris, which cannot be effected by the instillation of either cocaine or Eucaine into the conjunctival sac, a few drops of the Eucaine solution must be injected into the anterior chamber with a broad mouthed pipette after the corneal section has been made. In two minutes at the latest thereafter the iris is anasthetic,a fact of which I have fully convinced myself by experimentation upon two rabbits, as well as in the case of one man affected with cataract. I shall not expatiate upon the other ocular phenomena occasioned by Eucaine "B," as I have nothing new to report thereon. I shall only remark that *in squint operations its action was really marvelous* and in this field cocaine is not to be compared with it.

(1) Munch. Med. Wochenschrift 1896, No. 28.
(2) Deutsche Med,Wochenschrift, 1896, No.36.
(3) Munch. Med. Wochenscrift, 1896, Dec. 22.
(4) Deutsche Med.Wochenschrift, 1897, No. 6.

†Dr. P. Silex, Lecturer and First Assistant at the University Ophthalmological Clinic at Berlin.

Treatment of Gonorrhœal Ophthalmia.

The Cincinnati Lancet-Clinic, for April 3d, contains a very interesting paper on the subject by Dr. D. T. Vail. He concludes as follows:

1. The general practitioner should always warn his gonorrhœa and leucorrhœa patients of the danger of inoculating their eyes.

2. As the family physician is usually the first consulted, he has the golden opportunity which the first hours afford. He should sealed the unaffected eye at once.

3. It is well to bear in mind that all cases of purulent ophthalmia are not gonorrhœal; on the contrary, only a very small percentage are.

4. For diagnostic and scientific reasons, microscopical examination of the discharge should be made.

5. For the cornea to escape involvement is the great exception.

6. The best early treatment, in my judgment, is; (*a*) Leeching; (*b*) continuous iced applications day and night; (*c*) nitrate of silver, 2 to 4 per cent. solution, applied to the everted eyelids once or twice a day; (*d*) non-irritating gentle flushings of the eye every few minutes; (*e*) canthotomy downwards and outwards to liberate the lower lid.

The Use and Abuse of Ergot in Obstetrics.

Dr. Thos. More Madden (British Medical Journal) says, to use ergot or any of its preparations safely and effectively during parturition the presentation should, as a rule, be cranial; there should be no disproportion between the fœtus and the maternal parts, nor any obstacle to deliverance in the genital tract; the os uteri, if not previously fully dilated, should at least be sufficiently dilatable to allow speedy delivery by the forceps whenever that may become necessary; and a preparation of ergot should be selected and a dose given calculated to produce the required ecbolic effect. Under such conditions ergot might be given with utility when required either before, during, or after the second stage of labour, namely: 1. In some instances (*a*) of delay from inertia of the uterus before the full dilatation of a dilatable os, and in which there was any evident danger to either mother or child from protraction of labour. 2. It might be administered during the second stage (*b*) in nearly every case of long delay from inertia wherein the presentation was natural and the delivery not otherwise impeded, or in which (*c*) there was then either reason to apprehend the probability of subsequent hæmorrhage, or any such complication as might call for its use. 3. During the last stage of labour ergot might be employed (*d*) to hasten the expulsion of the placenta when delayed by inertia, or (*e*) for the arrest of hæmorrhage. 4. After it might be resorted to either immediately (*f*) to prevent or check flooding, or subsequently (*g*) to produce such tonic or permanent contraction as would effectually seal up the uterine vessels, and so lessen the liability to subsequent septic invasion, or (*h*) to effect the expulsion of clots, and so arrest after-pains. 5. (*i*) To stimulate such contraction as might quicken or secure the process of involution after parturition. In such cases ergot should be administered only once during labour, and then in such a bold, full, and effective dosage as might be likely to excite speedy and permanent or tonic uterine contractibility.

One part of camphor to ten parts of olive oil used hypodermically is effective in ether collapse. One grain of camphor may be given.

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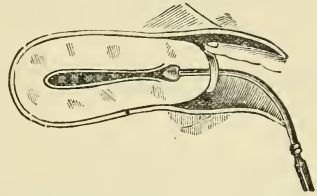

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Illinois State Medical Society.

The following were elected officers of the Illinois State Medical Society:

J. M. G. Carter, M. D., President; T. J. Pitner, M. D., First Vice-President; J. T. McAnally, Second Vice-President; E. W. Weiss, Secretary; George N. Kreider, Treasurer.

Next place of meeting is Galesburg.

The Influence of Drugs Upon the Secretions of Bile.

Drs. Pfaff and Balch have published (Therapeutic Gazette) their exceedingly interesting investigations upon this important subject. Their studies were made upon a woman of 38 years, who entered the Massachusetts General Hospital and who acquired, as a result of a necessary operation, a biliary fistula. After the patient had recovered from the operation and had regained her normal health, except for the continuance of the biliary discharge from the fistulous opening, Messrs. Pfaff and Balch proceeded to put her upon a standard diet and then to study the changes which took place in the biliary outflow from hour to hour and day to day. Although results obtained from a single individual can not be used as a positive determining factor in the decision of a scientific question owing to the possibility of idiosyncrasy in the individual producing unexpected results, a number of the facts which they have obtained are of great interest and throw considerable light upon previous researches which have been made upon this subject.

In the early part of their paper they give a valuable summary of practically all the work which has been done upon the biliary secretions of human beings, excluding whenever possible studies and results which were, evidently, from their character of little value in the production of scientific results. After careful study of the results which were obtained by these early investigators, and guided to a certain extent by these conclusions, Pfaff and Balch then proceeded to administer to their patient different substances supposed to possess a stimulant influence upon the flow of the bile. We have not space in this notice to describe the technique and details of their investigation; suffice it to state that the results which they have obtained are quite at variance with those which have been expected, and we find to our surprise, as it was doubtless to themselves, that there was practically but one substance which materially increased the flow of bile, provided that the considerable variations which naturally take place independent of the influence of remedies were excluded—this substance was bile itself. Thus, under the ingestion of the woman's own bile, which had been inspissated and made up into pills, the total quantity of bile secreted in 24 hours rose from about 500 cubic centimeters in 24 hours to nearly 700 cubic centimeters, and when the bile was no longer administered decreased to 449 cubic centimeters.

When ox bile was given it rose to nearly 800 cubic centimeters, and fell with great rapidity to about 400 cubic centimeters as soon as the substance was no longer administered; and, finally, when the bile salts were given a similar and almost equally marked increase occurred.

On the other hand the administration of calomel produced absolutely no effect, and corrosive sublimate was equally ineffective, no variations from the normal flow being produced.

The only drug which seemed to have any considerable influence beyond the bile which we have mentioned was salol, but even this produced so slight an increase that there is grave doubt as to whether it produced actual stimulation of biliary flow, for the flow only increased from 460 to 540 cubic cent. Although these results are surprising when compared to the results which we expect to obtain in the ordinary practice of medicine when calomel and other cholagogues are administered, they do not set themselves as diametrically opposed to the conclusions which have been reached by previous investigators, for it is a well known fact that many of the doses which have been found to produce a marked increase in the biliary flow in animals, or in man, suffering from biliary fistula, have no such influence in a healthy individual; and, on the other hand, that some substances which are not considered by the average physician as possessing any hepatic influence have markedly increased the excretion of this hepatic secretion in experimental research. The variations between practical experience and the various scientific investigations which have been made upon cases of biliary fistula seem to make it evident that the mere existence of a biliary fistula, in some unknown way modifies the influence of drugs which ordinarily possess the power of stimulating the liver to increased biliary secretion or excretion.

While all studies of this character must be regarded as of great importance and considerable interest, we can not help feeling that it will be a long time before practicing physicians will be willing to accept the idea that calomel and similar substances possess no influence upon the flow of bile in the ordinary individual.

Any physician or surgeon who has under his care a case of biliary fistula should utilize it in carrying out a careful investigation concerning this important subject, for it is only by comparing the results obtained in many investigations and eliminating the personal factors which are present in each case, that rules capable of wide application can be formulated for our guidance in practical medicine.

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CHRISTOPHER TOMPKINS, M.D., Dean,

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Headaches.

Dr. Hingston Fox in discussing this subject before the Hunterian Society laid stress upon its relation to arterial tension. He said:

The determination of the tension present rested partly on the sustained character of the pulse and partly on the accentuation of the sound of the heart, as heard over the aorta and in the neck. The headache due to school pressure in childhood was first noticed, a frontal pain relieved by rest and cod-liver oil. In adolescence and young adult life the rheumatic headache and that due to overaction of the heart and their appropriate treatment were first spoken of. The typical headache in anæmia was frontal and throbbing, and that due to the constipation was similar. In albuminuria the head pain more often affected the top or back of the head, and was unrelieved by lying down. All the forms of headache treated of so far were attended with *plus* tension, and this was true of the majority of cases of migraine. The one-sided pain and other symptoms of the periodic nerve storm were alluded to, and its frequent occurrence in women of gouty family. Besides the all-important constitutional treatment cannabis indica was strongly recommended, and several instances given of pushing it to intoxication without harm. The fresh extract was, in the author's opinion, the most useful remedy for headache attended by high tension. After brief notes on epileptic and neuralgic forms, low tension headaches were taken up, especially that of tachycardia, which was contrasted with the overacting heart already spoken of, where the vessels were tense. Caffeine was the remedy *par excellence* for headaches of low tension, the headache directly due to alcohol and the congestive form with flushed head and often amenorrhœa, as well as that caused by cough, all belonging to the low tension group. In middle life heart disorders caused headaches: in the earlier stages the tension might be raised, in the latter diminished. Mitral stenosis seemed to have a characteristic form. Menorrhagia was apt to be similarly attended. The cases of increased vascular tension so common in middle life, both in the well-to-do (gouty) and the poor (from toil and want) were considered and the headaches consequent on it, as well as the common "bewildering" pain at the vertex about the climacteric epoch. In the old the steady increase of tension, the senile heart, and the asthenic dilated heart at a larger stage brought their own head drscomforts, which were relieved by treatment on general principles. Instances of the great value of aperient saline in the *plus* tension of old age were given. It was submitted, in conclusion, that the state of the blood pressure was an important factor in many forms of headache and a guide to treatment, amongst specific remedies cannabis for the high and caffeine for the low tension pains being accounted of most value.

"Gas Bacilli" and Putrescence in Utero.

Dr. G. W. Dobbin has reported in Johns Hopkins Hospital Bulletin, a case of puerperal sepsis due mainly to the bacillus ærogenes capsulatus. The patient, a multipara with a generally contracted pelvis, had been in labor two days with a child of large size, and was under the care of a midwife. On approaching the bed a sweetish, offensive oder was perceptible, and the maternal genitals emitted a bubbling, crackling sound, whilst the vaginal discharge contained may gas bubbles. Delivery was accomplished with the Tarnier basiotribe, under chloroform. Immediately after it there was an explosive escape of sickening fetid gas from the uterine cavity. There was as yet no tissue emphysema. Next morning "gas bacilli" were found in the tissue of the fetus and in the placenta, and the same evening the mother died. A few hours later the body was enormously swollen and emphyeematous. The fetus and the placenta were likewise infiltrated with gas, which burnt with a flame when ignited, and were infested everywhere by the "gas bacilli" along with staphylococci and streptococci. The placental blood vessels contained gas cysts surrounded by a zone of these bacilli, cultures of which were made. A pigeon and rabbit were inoculoted and rapidly developed an edematous emphysema.

These observations are in accord with those of Welch and Nuttall who attributed many cases of supposed entrance of air into the uterine sinuses to this parasite. They also found that this bacillus when inoculated into rabbits was not usually fatal, but that if the animal was then killed the microorganism developed rapidly, with abundant formation of gas in all organs.

Dr. Dobbin argues that in this case the bacilli were introduced by the nurse; that they found in the dead fetus, as in the dead rabbit, a suitable nidus, and filled tne nterine cavity with putrid gas; and that the mother died not from infection by the bacilli, but poisoned by the toxins produced by them, her own macerated vaginal tissues, moreover, acting as a seat of germ development.

Practical Evidence.

I used your sample of Resinol on myself for Pruritus Ani, which has been my curse for several years, defying all applications. The first application proved efficacious, and I am now using and prescribing Resinol for the above and several other itching troubles. In fact, I think it is the best remedy I have ever used for the diseases for which it is recommended.

H. B. LEIGHTON, M.D., Boston, Mass.

I have used your Resinol in Inflammatory Rheumatism with happy results. Hope others will try it. I know they will be pleased.

E. J. BURNSIDE, M. D., Phila., Pa.

It gives me pleasure to say that Resinol is the best application for local treatment of Eczema I have ever used. I can also bear testimony to its efficacy in Erysipelas, and its soothing and healing virtues in all inflamed surfaces.

A. S. FRENCH, M.D., Lawrence, Mass.

It is but just that I should attest my satisfaction with the use of Resinol. It is a marvel of efficacy in Pruritus Ani. In relief of soreness, due to scalding from acute Nasal Coryza, it acts like a charm.

J. H. THOMPSON, M.D., Goshen, N.Y.

Resinol is by far the best application I have ever used in a practice of 48 years for the diseases recommended. A case of Eczema commencing on the scalp and extending over the entire face and which had been under the treatment of various physicians with no apparent benefit, was completely cured by it in less than two weeks.

J. J. WORTHY, M.D., Lavalle, Wis.

I am very much pleased with the effects resulting from the use of Ung't Resinol in cases of Itching Piles, Pruritus Ani, and Vulvae, Eczema, Erysipelas, &c. In fact it is the remedy "par excellence" in all cases where there is a Congested or Hyperaemic condition of the capillary Blood Vessels. C. D. SMITH, M.D., Atlanta, Ga.

I frequently prescribe Resinol, and am well pleased with its work. It has proved very useful in many forms of eruption of the skin, and especially so in Pruritus Vulvæ or Ani, and in Eczema of other parts of the body.

LUCY HALL BROWN, M.D., Brooklyn, N. Y.

I take pleasure in stating that I have found Unguentum Resinol almost a specific for Pruritus Ani, Itching Piles and Marginal Eczema.

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Resinol is a harmless antiseptic and a true skin anæsthetic, absolutely non-irritant and non toxic (free from lead, mercury, or cocaine), can be applied to mucous, excoriated or denuded surfaces of any extent at any age without fear of untoward results, and is not contra-indicated by any internal medication that may be deemed advisable.

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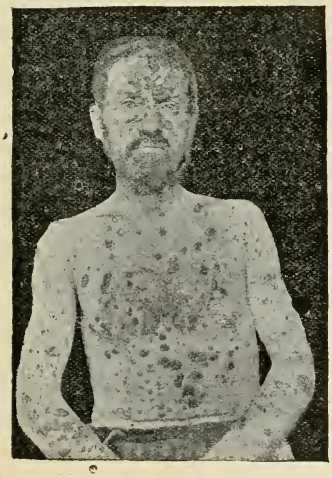

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In Secondary and Tertiary Syphilis this preparation is considered by all the leading authorities on the subject to be the best. It should be given in teaspoonful doses, three or four times a day, and continued for several months.

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CHARLOTTE, N. C.

Hepatic Abscess.

This was the title of a paper by George Ben Johnston, of Richmond, Va., read at the Congress of American Physicians and Surgeons, May 5th, 1897. He said:

The subjective symptoms of hepatic abscess are pain in the region of the liver, usually constant and radiating backward and to the right shoulder, of dull aching character; less acute when the abscess is deep seated, but more acute when the abscess is near the surface and perihepatitis is present. Sharp pain caused by movement of the liver in the respiratory act may provoke dyspnœa. Profound depression and lassitude are out of proportion to the gravity of the disease and appear early, and insomnia may be an enduring symptom. Restlessness, headache and irritability of temper are present in some cases. Sometimes lethargy and somnolence supervene. An abscess on the upper surface often produces irritating cough which the recumbent posture increases. The digestive disturbances are loss of appetite or perverted appetite. The breath is often fetid and eructations are usually present; nausea is a variable symptom, and there may be vomiting after the ingestion of food. Diarrhœa or constipation may exist or alternate. The tongue is fiery red or denuded, and glazed or heavily coated with yellowish-white fur, in which case the margin and tip are usually very red. The most invariable of the objective symptoms is enlargement of the liver, as evidenced by bulging of the right hypochondrium. There is pronounced muscular rigidity over the affected region. On palpation, a large, smooth and elastic tumor is felt. Fluctuation is often present and is then a most valuable symptom, but it is demonstrable only when the abdominal walls are very thin and relaxed. Jaundice occurs only when the common bile duct is occluded by pressure or when catarrh of the ducts is present. The posture is almost characteristic. Right-side decubitus is maintained when the abscess is near the front or on the under surface of the organ. If it is on the diaphragmatic surface, the body will be raised and inclined to the right. The thighs are flexed on the abdomen. Progressive emaciation is a conspicuous feature. The temperature is erratic in its course. Subnormal temperature is frequent. This in the presence of other symptoms is suggestive of hepatic abscess. It is not so apparent in other septic processes. The urine is of deep color, high specific gravity, and usually contains abundant deposits of urates. The most constant and therefore most valuable symptoms are: history in which dysentery and chill appear, general malaise, pain and tenderness over the liver, enlargement of the liver, hectic, sweats and rigors, right-side posture, erratic temperature, progressive emaciation, and gastric disturbances. The treatment should be prompt, bold and radical. No measure is successful which fails completely to evacuate the abscess and allow free drainage. This can be done with precision and safety only by incision. Aspiration, puncture with trocar, direct puncture with scalpel, opening by caustics or thermo-cautery are uncertain, insufficient, dangerous and unsurgical. Entrance to the liver may be transperitoneal or transpleural, but the latter increases the gravity of the situation. The line of incision is to be determined by the position of the abscess. If adhesions are found between the liver and the abdominal wall, the abscess may be opened immediately, an inspirator needle being used to locate the cavity with accuracy. If there are no adhesions the operation may be done in two sittings, the wound being packed and the adhesions forced; or it may be single, the margins of the hepatic being stitched to a deeper portion of the superficial wound. In passing through the pleura, resection of one or more ribs is necessary. The pleural incisions on the parietal and diaphragmatic surfaces must correspond, the cut margins being sewed together with continuous suture of fine cat-gut forming a "buttonhole," through which the diaphragm is opened and the operation continued. The opening into the liver should be as free as is consistent with safety. If the cavity is large, drainage may be provided by the use of one or more drainage tubes and a light gauze packing. Packing suffices for small cavities. Healing is usually rapid. If slow, constitutional treatment and stimulation of the abscess walls by two per cent. carbolic solution will usually hasten recovery.

Cheap Disinfectant.

Nitrate of lead is the cheapest disinfectant known that fulfills its intent. It does not, however, prevent putrefaction. The chloride of lead is much more effective in all directions. It is made by dissolving a small teaspoonful of the nitrate of lead in a pint of boiling water; then dissolving two teaspoonsful of common salt in eight quarts of water.

When both are thoroughly dissolved mix the solution. When the sediments have settled you have two gallons of clear fluid, which is a saturated solution of chloride of lead in water. A pound of nitrate of lead will make several barrels of the liquid and cost two shillings retail.

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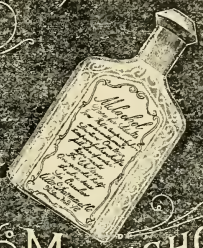

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Described by HIPPOCRATES as "Dolikos a Bean possessing strong digestive powers, a strong supporter of function a positive cure for the gastric catarrh of alcoholism A general healing remedy for all local lesions, Ulcers and Eruptions A Specific as a poultice in all opthalmic inflammations."

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THE THREE MOST VALUABLE CONTRIBUTIONS TO MODERN THERAPY COVERING MOST OF THE PATHOLOGIC CONDITIONS OF THE ORGANISM USED SUCCESSFULLY IN ALL HOSPITALS AND BY CLINICIANS GENERALLY. PHYSICIANS will be furnished full size bottle FREE on payment of Express or Mail charges PLEASE name Journal in which this card appears.

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Absorbent Power of the Skin.

Dr. Juhl has been making experiments on the absorbent power of the human skin for fluids in the form of spray. The lower extremities were isolated from the rest of the body by a partition, the opening in which was carefully packed with indiarubber, so that no fluid might pass to the rest of the body. The spray was then made to play upon the isolated extremity, and only normal skin was exposed to it, all patches which were unduly reddened being covered with gutta-percha tissue firmly fixed with chloroform. The skin was carefully cleansed with soap and water before the commencement of the experiment; and, after the spraying, the superfluous fluid was wiped off, the leg rubbed with fat, and a close bandage applied, before the limb was removed from its isolation. The drugs used were ferrocyanide of potassium, salicylic acid, salicylate of soda, iodide of potassium, and tincture of iodine; and all of them were found, in greater of less quantity, in the urine. Alcoholic solutions were found to be absorbed more readily than the aqueous.

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Every good doctor wants to keep abreast of the times. If a good thing is discovered, he wants it, he needs it. We are pleased to add our testimony to that of many others, as to the efficacy of Pyroctin.

We call the attention of the profession to what we consider a strictly first-class, up to date antipyretic and anodine, Pyroctin.

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Trial carries conviction. Once used, always wanted.

Imperial Granum.

The following letter, just received by the Imperial Granum Company from the publisher of one of the most influential of American Medical Journals, must certainly be most satisfactory to the manufacturers of that Sterling food preparations:

"Beginning with the grip, I ended up with a severe attack of gastric fever. This gave me an excellent opportunity to test Imperial Granum, and I assure you it was a great pleasure to have something that was at once so pleasant to the taste, so nourishing, and so grateful to a delicate stomach. After being compelled to abstain from food for three or four days, I partook of the Imperial Granum quite freely, without the least disturbance of the stomach. As we have had much experience in dealing with delicate and sensitive stomachs, we thought it very remarkable that any food should prove so nourishing and yet could be taken so freely under such circumstances. I was glad to have such an opportunity to test your food, and I shall always be glad to recommend it."

Treatment of Retroversion of the Uterus.

Dr. F. H. Martin (American Medical Association) claimed that no scientific gynecologist should adopt any routine treatment for retrodisplacement, but should vary the treatment to suit the case. The men who condemn Alexander's operation are those who have not done it frequently enough to understand it. No one should express his opinion until he had done at least 100 operations, when he could not condemn it. Hernia never results from Alexander's operation. The operation has but a small range of usefulness, namely, in retroversion without adhesion or surrounding inflammatory conditions. It should not be done in prolapse unless the support is restored by a simultaneous operation. The round ligaments prevent retrodisplacement. He ties the two ligaments together under the skin over the dubes, thus shortening them. Ventrofixation is of service in women who will not become pregnant. He employs Fowler's operation in doing the fixation, in which the urachus is made to support the uterus.

Birmingham, Ala., June 12th, '97.

Resinol Chemical Co., Baltimore, Md.

Gentlemen:—I wish to say a few words of highly deserved praise in reference to your wonderful preparation, Unguentum Resinol. I have had the most flattering success with it in my practice in the treatment of Pruritus Ani, Itching Piles, and also in allaying the intense itching and burning of eczema. I have found it superior to any preparation of its kind that I have ever used, and I think it stands without a peer as an antipruritic and sedative. I could relate many interesting cases in which I have used Unguentum Resinol. I trust that all of my professional brethren will use this valuable preparation whenever it is indicated.

Yours most respectfully,

A. L. Scott, M. D., Ph.G.

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LISTERINE is to make and maintain surgical cleanliness in the antiseptic and prophylactic treatment and care of all parts of the human body.

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LITHIATED HYDRANGEA.

A valuable Renal Alterative and Anti-Lithic agent of marked service in the treatment of Cystitis, Gout, Rheumatism, and diseases of the Uric Diathesis generally.

DESCRIPTIVE LITERATUE UPON APPLICATION.

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Melachol, Phaselin and Rheumagon, Three Recent Additions to the Materia Medica Adapted to the Pathological Faults of the System, and to Aiding Nature in Maintaining Normal Functions of the Organism.

MELACHOL.

Chemistry:—Described as "a reduced chemical combination of phosphates with nitrates of sodium."

Antagonists:—Belladonna, stramonium and hyoscyamus antagonize the action of Melachol. Alcoholic beverages, malt liquors, and the metallic salts limit the action.

Physiological Action:—Melachol is readily borne by the stomach. When the stomach is irritable, or the intestines inflamed, it is not rejected, but instead, corrects the morbid condition. The conditions under which it acts on the intestines are altogether normal. There is a decided secretion from the intestinal glands, and an acceleration of peristalis. The extent to which the secretions is augmented, is, however, very moderate. There are no unpleasant after effects. In addition to being a mild laxative, it is a local sedative and anodyne, relieving any pain or uneasy feelings by acting anæsthetically on the gastric nerves. In addition, diffusing into the blood, it carries the same effect to the nerve centers. Sensation and motor power are not modified by it. It reduces the capillary circulation, and gives rise to a slight increase of the temperature.

Problem:—Is there any action on the excitability of the striated muscles? There may be, but apparently there is none. At any rate, it does not modify their structure.

A second query is as to administering the remedy to children. Is it perfectly safe and advisable? It is. The proper dosage is given on the bottle,

Therapy:—Absolute confidence may be placed in Melachol all along the physiological lines. It is very effective in pyrosis, gastric catarrh and irritative dyspepsia. For the vomiting of pregnancy it is, perhaps the most reliable of remedies. The same applies to the vomiting attendant on the exanthemata, and to that which arises from irritation of the mucous membrane of the stomach by indigestible food. As a laxative in the materia medica is deserving of greater esteem. Impaction of the cæcum typhlitic and allied disorders, respond to no treatment more satisfactorily. In dropsy renal, cardiac, or portal, Melachol is conspicuously beneficial. Cholæmia, uræmia, œdema of the brain or any increase of intracranial blood pressure, are conditions requiring the use of Melachol. For catarrh of the biliary ducts, the readiest relief is given, although there is no true hepatic action.

While treating conjunctivitis with applications of Phaselin, it is advisable to exhibit Melachol in large doses.

PHASELIN.

Preparation:—Tablets.

Derivation:—Phaseolus Mexicanum, seu Egyptianicum.

Botanical Details:—Genus Phaseolus is allied to the Genera Dolichos, Faba, Soja and Cajanus, Leguminous,

Medicinal Portion:—The bean. The peculiar virtues are also contained in the leaves, but in a lesser degree.

Chemistry:—Phaselin is the active principle, or possibly, one of two, there being reason for suspecting another principle. Phaselin is a saponifiable oil, associated with resinous matter. It is entirely distinct from legumin, which is the active principle of faba vulgaris; but like it, it constitutes about 24% of the bean.

Physiological Action:—1. It is remarkably nutritious. 2. It is readily digestible. 3. It possesses the property of converting the nitrogenous constituents of food into peptones. 4. It promotes the appetite, causing a free flow of saliva, gastric juice and intestinal juices. 5. It is a stomach tonic. 6. It relieves the morbid state of the mucous membrane of the entire alimentary tract. 7. It has a sedative action on the gastric nerves. 8. In its local action it promotes healing, prevents putrefaction and arrests fermentation.

Composition:—Phaselin is to be considered as the active principle in medicinal form.

Therapy:—For the promotion of the organic functions and for healing properties, it is of distinctive value. For atonic dyspepsia and gastralgia, it is remarkably effective. In the chronic gastric catarrh of drunkards it heals the mucous surface, aids the feeble digestion, increases the appetite and relieves the nervous symptoms. In atonic diarrhœa, where there is a paretic condition of the muscular layer of the bowel it speedily cures. For nursing mothers it is a food. For all forms of gastric uneasiness, and pain, it is never disappointing.

Simple ulcers, wounds, fistulas, burns, etc., find in the powdered Phaselin, dusted over the diseased surface, an excellent application, antiseptic, anodyne and changing the morbid action. Even where the lymphatic glands are involved, and in rodent ulcers, it is signally beneficial. The same may be said of its use for skin diseases.

Used in the form of unguent or poultice, it is very grateful. In all inflammations of the conjunctiva, whether acute or chronic, and especially where granulations occur, it is of excellent value. For follicular pharyngitis and it ulcerations of the pharynx, larynx and trachea, treatment by insufflation is attended by pleasing results. The remedy may also be employed as a gargle. A glycerite may be prepared that is of almost magical value for the chronic otorrhœa of children. The glycerite is of value for vulvitis and hemorrhoids.

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Composition:—The Sodium Phosphates and Iodides in combination.

Synergy.—The two salts materially assist each other's action.

Physiological Action.—The action of the heart is depressed, the blood pressure and temperature lowered, and the body-weight and forces of the organism diminished. It increases the flow of the saliva, and—when given on an empty stomach—that of gastric juice. There is an apt diffusion into the blood. There, with the simultaneous presence of oxygen, oxidation of the organic constituents of the blood is accomplished. This process, however, is quite slow and gradual. Elimination is chiefly by the kidneys, the quantity of urine being increased, and with it, that of the urea, uric acid, and extractive matters. In some subjects there is a slight irritation of the broncho-pulmonary mucous membrane.

Query.—Will emaciation occur if Rheumagon is administered for a lengthy period? It will; but there is no danger of any such result, as the remedy acts rapidly and it is not necessary to protract its use.

Therapy.—The utility of Rheumagon is conspicuous in the treatment of constitutional syphilis. It is to be accounted remarkable that it is as applicable in one stage as in another. Equally of value for the tertiary symptoms, the secondary effections of the skin, and the squamous, papular, and tuberculous syphilides, it is of quite applicable in paraplegia and allied neuralgia of syphilitic action. In short the syphilitic virus is eliminated from the system. Rheumagon, especially where there is present a thickening of the fibrous tissues and inflammatory deposits about joints, tendons and nerve-trunks is very signally benefitted by Rheumagon. It is no exaggeration to denominate it specific. In the hyperpyrexia of the acute disorder, there is no remedy more effecacious. It relieves, shortens the duration and diminishes the swelling.

Rheumagon is affective in the treatment of hay fever and spasmodic asthma. It is most beneficial when the siezures are induced by an acute bronchial catarrh, with profuse secretion.

In the treatment of strumous enlargement of the cervical, inguinal and mesenteris glands, it is of high degree of utility.

W. H. Morse, M. D.,
F. B. S. Sc., Westfield, N. J.
—*International Journrl of Surgery, June, 1897.*

Relapses in Typhoid Fever.

Dr. William Osler of Baltimore at the recent meeting of the American Medical Association spoke upon this subject. The doctor was often erroneously considered responsible for these relapses by relatives of the patient; nor was the diet definitely responsible, unless in a limited number of cases. The term relapse should, he thought, be restricted exclusively to reinfection after a distinct and definite period of apyrexia. Intercurrent relapses, with fall of temperature to nearly normal, did not belong to the same class as true relapse. The sources of reinfection were still unknown. The typhoid bacilli might be present in different organs as well as in the intestine. Out of five hundred cases of typhoid treated in his wards there had been relapse in forty, which was about the percentage given by Liebermeister, and very much larger than that given by Murchison. There might be double, rarely triple, very rarely four or five relapses. In one of his cases the disease with two relapses covered a period of nearly six months. The Brand treatment had nothing to do with relapses.

Acute Gastro-Intestinal Septicæmia in Childhood.

Comby has called attention to the existence among children, from faur to eight years of age, of a form of gastro-enteritis which has exactly the course and gravity of a cholera infantum. It follows sometimes the ingestion of food bad in quality or improper for the age of the child, sometimes without known cause. It begins as a febrile indigestion, but suddenly diarrhœa begins, vomiting becomes uncontrollable, the facies of cholera appears, and the child dies in three or four days. Fever may be wanting from the beginning. The knowledge of this condition is important, for with children of this age the gravity of the condition may not be suspected at the beginning; and even the most energetic treatment, with lavage of the stomach and intestines, injection of artificial serum, etc., may utterly fail.

The Blood in Chorea.

Dr. C. W. Burr in the University Medical Magazine draws the following conclusions in reference to the blood in chorea.

The blood is rarely absolutely normal in amount of coloring matter and number of red corpuscles during an attack of chorea. There is usually a moderate diminution in the hemoglobin and a relatively still smaller decrease in the number of red corpuscles. The anæmia is therefore, chlorotic in type. There is no relation between the severity of the chorea and the severity of the anæmia. When the anæmia is severe there is usually some complication competent to explain it. All things considered, we feel justified in believing that anæmia is not an immediate, direct, exciting cause of chorea, and but infrequently a predisposing cause. In the great mass of choreas with very moderate anæmia it most probably is a result of the chorea, a secondary condition. As to the mechanism of its production we know no more than we do of the method of action of other profound functional nervous disturbances, for example, emotional shock in reducing the blood count—namely, nothing.

In the cases caused by bacterial poisoning, which so far have not been proven to be numerous, it is possible that the anæmia is toxic.

There is one form of anæmia the existence of which cannot be shown by any means at present at clinical command—namely, the condition in which there is an equal decrease in all the elements of the blood, solid and liquid, a quantitative anæmia. This may exist and be the cause of some cases of chorea, but it is not susceptible of proof. Against the probability of such causation is the fact that hemorrhage due, for example, to trauma (which, of course, causes a temporary quantitative anæmia), is not followed by chorea, and the improbability that a quantitative anæmia due to congenital or internal causes would be cured by rest in bed for a few weeks, regulation of diet and the administration of a small ammount of arsenic, a method of treatment of chorea which so often is followed by recovery.

Long Forceps [Axis Traction] versus Turning.

Dr. St. Tosh (British Medical Journal) has published out of the rich materiul of Professor Tauffer's Obstetrieal Clinic a series of cases in which he employed long forceps instead of turning. The conclusions he drew in his very elaborate paper were the following: 1. The use of the forceps at the inlet of the pelvic cavity is not so hazardous as is still believed by many writers, and is decidedly more favourable to both mother and child than internal podalic version. 2. In all cases where speedy delivery is required for the safety of the mother and version is not applicable the axis traction forceps should be tried before resorting to perforation. 3. In cases of moderately contracted pelvis long forceps are to be preferred to turning, because by thus waiting the expulsive powers have a chance to complete labour spontaneously. 4. Should the forceps at the inlet prove of no success, then perforation is to be performed at once. Symphyseotomy may under favourable circumstances prove to be the right proceeding but intestinal podalic version is decidedly contra-indicated in these cases. 5. Axis traction forceps of different lengths may be used, but Dr. St. Tosh prefers Tarnier's instruments.

The Negro.

The report of the Tennessee State Board of Health, commenting upon the negro population, says:

"The average African regards it as his 'paradise,' and hence they flock to this city in vast numbers, where vice, disease, voodooism, and almost total neglect of hygiene and proper sanitation soon play havoc with the race. The colored people are also lacking in constitutional vigor and more readily succumb to certain maladies than their white brethren. They are specially predisposed to tuberculosis and scrofulous diseases; their bones are massive, but spongy, lacking in strength and density: the brain and nervous system generally do not attain that high degree of development characteristic of the Caucasian race. The strumous diathesis universally prevails, and, although the negro enjoys comparative immunity from malarial diseases, he readily succumbs when attacked by gastro-intestinal disorders or disease of the lungs and other viscera."

Opportune with the published report of the American Pediatric Society giving statistics proving the efficacy of serum treatment, we have received the latest pamphlet descriptive of the various Antitoxins prepared at the Biological and Vaccinal Department of the New York Pasteur Institute under the direction of Dr. Paul Gibier. Messrs. Lehn & Fink who supply the drug trade will be pleased to mail a copy to any physician on application, and confidence has not been violated by the publication of the many testimonials certifying to the successful employment of Gibier's Diphtheria Antitoxin.

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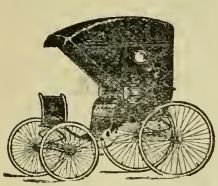

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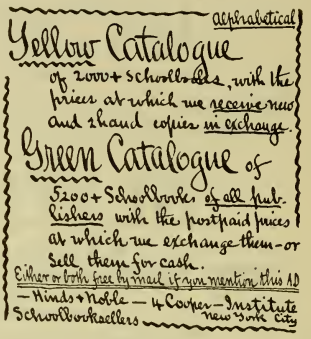
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The Charlotte Medical Journal.

Vol. XI. CHARLOTTE, N. C., AUGUST, 1897. No. 2.

The Prevention of Tuberculosis.

By Karl von Ruck, B. S., M. D., Asheville, N. C.

Tuberculosis is one of the diseases in which the direct cause is positively known to be a specific micro-organism, the bacillus of Koch, without which the formation of true infectious tubercle cannot occur.

The presence of this bacillus in the diseased tissues, and in their secretions and excretions, its liability to enter the respiratory and digestive organs, when, in the absence of proper disposition, the discharged tuberculous material, has become dry and powdered into dust; and its possible presence in food products from tubercular animals are all familiar facts; and the communicability of the germ from man to man, from man to animals, from animal to animal, and again from animal to man through the medium of the air and food is so well established, that there is no room for doubt.

Thus in every case of tuberculosis the infecting germs have been derived from a previous case; and if it were possible to destroy all tuberculous discharges, and avoid all tubercular food products, the problem of further infection of man and animals would be solved; and the disease would disappear, after those now infected had passed away.

Our direct preventive measures must therefore have for their object the proper disposition of all tuberculous discharges; so that it shall be impossible for them to enter the air, and be inhaled, to be deposited upon our food as dust, or to enter the water which we use for domestic purposes; and the avoidance of all food products which being derived from tubercular animals may convey the germs to the digestive tract.

The degree of difficulty which must be encountered in such an undertaking is, however, such, that we cannot hope to extinguish tuberculosis in man and animals; since it would require exact bacteriological knowledge, and sincere co-operation, not only on the part of all physicians, but on the part of all other people, especially of those who already suffer from the disease, or who are members of households, communities and states, where the disease exists.

All that we can strive for, is the restriction of the evil, by which the opportunities for infection will be diminished; so that eventually the disease shall become less prevalent; and every preventive effort in an individual case must be considered as conducive to that end.

So far as the spread of the disease occurs through human tuberculosis, the medical profession can for the present be the only effective agency through which preventive efforts may become operative, and it appears doubtful to me, whether or not the enactment of laws, under which the patient or householder becomes responsible would be of material aid.

Tuberculosis is certainly not a disease which justified the quarentine of patients either for their own good, or for that of others; and even if it were it would scarcely be feasible to do this with perhaps several millions of people who suffer from it in one form or other in this country.

If we need law at all, it should provide that cases of tuberculosis should be reported by the attending physician, that he be furnished by the state with printed instructions as to the dangers of infection, and its mode of prevention, a copy of which he must certify to have delivered to the responsible householder who harbors such a patient, when he reports the case.

I also believe that in case of removal or death of a person suffering from the disease a report from the attending physician should be demanded, upon which he should be required to state whether or not the room or appartments occupied by the patient have been properly disinfected in accordanee with the instructions furnished; and if not, compulsory action by the local health authorities should be provided.

Such a law, could meet no reasonable opposition from the medical profession on the ground of meddlesome interference by officials, with private patients; and it would pave the way to more rigid measures in the future if experience would point to their necessity and benefit.

The amount of benefit to be expected from such a law may be variously estimated according as we look at the probable results.

My experience with several thousand patients, previously under the care of other medical men, shows, that only in a minority of the cases, were the patients, or accompanying friends fully aware of the danger

of infection from the sputum and excretions; and a lesser number still, had received any detailed instructions as to its prevention.

On the other hand I found that most patients were conscientious in observing the rules given them in proportion to the degree of their intelligent comprehension of the desired object: and any lack of interest on their part was quickly removed, when they understood, that they were in danger of further infecting themselves, and that their recovery depended also in a large measure upon its avoidance.

I believe, therefore that many physicians neglect to properly instruct their patients, and their families,or, are not explicit enough to make them understand all the details and objects to be obtained; and conclude, that explicit printed instructions in plain and simple language to the patient or householder, would as a rule be followed, and that such a law would keep the physician's interest in prevention more active by being consulted about the details.

The final disinfection, compulsory, or voluntary, of the rooms occupied by such patients is certainly a very desirable object.

In the restriction of infection from animals we can proceed more rigorously; for no one would for a moment think of comparing the value of animals, or of any number of them, with human life.

All efforts that are possible should be made for the enactment of laws for compulsory inspection; and for the application of the Tuberculin test in cattle and, perhaps eventually, also in swine, by competent persons at the expense of the state. The law should also provide for compensation to the owner, if a diseased animal is destroyed, and should include necessary provisions for the isolation of healthy cattle and for disinfection of stables and enclosures.

The owners would indeed find that such a law is also to their own pecuniary interest, and though compensation would be a moderate one, it would in a measure help to bear the loss incurred by the individual for the benefit of the community.

In estimating the prospective benefit from protective measures against infection from tubercular animals we may well remember,that we are not yet ready to affirm, that human tuberculosis is chiefly contracted from human subjects of the disease; for myself I am free to say that I should not be surprised if it were eventually demonstrated that the milk and flesh of tubercular animals are equally if not more responsible for the prevalence of the disease among man.

If we now proceed to consider the measures which we must advise and advocate for the protection of non-tubercular individuals against tubercular infection, it will be apparent that the noninfected members of society can do little for their individual safety, unless they isolate themselves from all intercourse with their fellow beings by removal to previously non-inhabited localities.

By the aggregation of man in towns and cities, and by existing relations with others through the manifold avenues of communication, and inter-dependence for services and supplies, the advent of the tubercle bacillus through dust and food into the air passages and alimentary canal can readily take place and the mode, time and place of the infection can rarely be demonstrated.

The occurrence of actual infection may not be subject to demonstration for months and years, during which time the disease may be latent, or may involve only parts and organs to a degree,that there is not sufficient disturbance of their integrity and functions to cause appreciable anatomical alterations during life, or symptoms which attract attention.

To prevent infection from man to man, it is therefore chiefly to the patient and to the persons in his immediate circle, that we must address our efforts, and for success we must appeal to their own interest instead of pleading for the protection of others.

If we do this with sufficient clearness to secure conviction as to the existing danger to themselves, and to those in whom they have a direct interest, we find as a rule that they are desirous of protecting themselves, and they are liable to faulty conduct and methods chiefly on account of their deficiency in knowledge of the necessary details in dealing with micro-organisms.

Thus it is of greatest importance that the personal danger of reinfection and of infection of members of the family shall be made to appear the chief object of our solicitude.

If the resulting benefit from right action is presumed to be chiefly in the interest of persons in whom the patient and friends have no special interest, and if this benefit is to be a negative one, to arise possibly at some future time, the probability of the patient or his friends acting rightly, especially at the slightest sacrifice of convenience to themselves, is greatly diminished.

But if the compliance with our instructions for the benefit of strangers should imply a sacrifice of even small pecuniary value, if for instance we should ask for the purchase of disinfectants, nine chances to one, we should have to supply them our-

selves, and more likely than not, they would not be used in an efficient manner, even if supplied without cost.

Most of the measures which we require are however primarily in the interest of the patient and friends; as to the former, there can be no reasonable doubt that he is in danger from his own tuberculous discharges.

If his infection can have occurred in the first place through the carelessness of some one else, his own carelessness may be the cause of the infection of organs not yet involved in the disease, or in the infection of still intact portions of organs in which the disease is established; as for instance the lower lobe of the affected lung, or the non-involved opposite lung, an occurrence under which the chances for recovery may be absolutely lost.

For the present we must accustom ourselves to insist upon the proper disposition of tuberculous discharges, without a special law making it obligatory, realizing that we are in truth liable to like censure from neglecting it, as we would be, should we disregard to give proper advice against the spread of diphtheria, typhoid fever, or small pox.

The public has really a right to demand of physicians the exercise of a reasonable amount of knowledge and skill, and of proper efforts not only in diagnosis and treatment, but also in guarding against the spread of disease.

The literature of the past fourteen years is so replete with evidence of the infectious character of Tuberculosis, through the medium of tuberculous discharges, that for a physician, the pleading ignorance thereof, is of no avail; and even those who for any reason refuse to acquiesce in the general belief, are, nevertheless responsible to act upon it, until they have furnished sufficient proof to the contrary so as to reverse the current of present medical opinion.

This being conceded, we may consider what our measures and directions shall be to our patients and to their attendants.

In pulmonary tuberculosis the sputum is necessarily the especial object against which we must direct our measures; and first we must prevent its promiscuous deposit.

Patients must, therefore, be provided with expectoration glasses, cups, or cuspidors, containing water, or with sanitary cuspidors made of waterproof past-board, and all expectoration must be deposited into such receptacles.

The patient must be instructed to use great care to deposit the expectoration into the receptacle, and not upon its surfaces, or adjacent to it, as is very likely to be the case with careless persons.

The sanitary cuspidors obtainable in the market are furnished with a special frame and lid which hold the paper inset, and can be commended for the convenience of patients in bed, and for the advantage that the lid prevents the access of flies.

The paper part of sanitary cuspidors should be burned, and the contents of other expectoration vessels emptied and the vessels disinfected twice every day, or more often, according to the amount of expectoration collected.

In private practice washing and rinsing with boiling water of permanent expectoration-vessels is sufficient; but in hospital and institution practice, in hotels and boarding-houses of resorts where many tubercular patients go for climatic treatment, more thorough disinfection should be carried out.

This, I believe, is best accomplished by the addition of a powerful germicide to the water in the cuspidor.

After much experimenting, I find corrosive sublimate the best, being odorless and cheap. Solutions of 1 part to 1000 should be kept ready for use, and should be placed in the vessels in about double the quantity of the probable amount of sputum they are likely to receive.

The contents of these vessels may then be thrown into sewers, or in their absence they should be buried or burned. Burning is undoubtedly the best method of disposing of collected sputum. The vessels are emptied upon saw dust or shavings, confined in a wooden box or other receptacle, and after adding kerosene oil the whole is ignited.

After emptying, the vessels must be soaked and rinsed in a solution of corrosive sublimate, one part to two thousand; a specially kept wooden tub or large pail half full of the solution will answer very well; several spittoons or vessels may be soaked successively in the same solution.

The metal frame and lid of the sanitary cuspidors must be washed in a two per cent. solution of carbolic acid, each time when the paper part is changed; the same solution may be preserved for use upon several successive days if expense is an object.

In rooms occupied by patients the large slop-jars which are, as a rule, part of the toilet set, should be preferred to smaller cuspidors, they are higher, have a wider top, are easily kept clean, and are accessible to more thorough inspection.

Under proper instructions I find that in the institution under my care, the patients follow the rules to the letter; and I have no doubt that the considerations which secure compliance in institutions will prove equally effective in private practice.

While we thus tell our patients what to do with their expectoration, it is equally important to tell them what not to do, and we need to especially warn them against spitting into handkerchiefs, upon floors, and carpets, into open fire places especially when not in use, out of their windows, or over the rails of piazzas upon the ground.

More reprehensible still is the swallowing of sputa, which some patients practice, when there is no vessel near at hand, all patients are liable to find themselves so circumstanced, and whatever we may say against handkerchiefs, under such exceptional circumstances, it is the only choice the patient has unless he spits upon the floor or swallows his sputum. Of the three evils the handkerchief is the least, and I recommend my patients to carry some paper napkins, special cloths, or very cheap handkerchiefs for such emergencies, which may also be used to hold before the mouth during violent coughing, and for wiping their lips after expectorating. These napkins or handkerchiefs are to be used only for the purposes named, and when used, they should be frequeutly changed and burned before they become dry enough to be a source of danger.

I have attempted to introduce the Detweiler expectoration flasks, but found such an unwillingness to carry and use them, that I gave up, believing that so long as we cannot get our patients to willingly use them, it is better to give them the napkins or cheap handkerchiefs instead, to which they make no objection.

In severely ill patients, and toward the close of life, when they become helpless, paper napkins and cloths are the only available receptacles for expectoration, and it is in this helpless state that the friends and nurses must be especially cautioned to the greatest care and attention.

Occasional accidental soiling of something or other will, however, occur in all classes, and even with the most sensible patients who are desirous of following all instructions. For such accidents, solutions of corrosive sublimate, or of other disinfectants, should be kept on hand by every patient who should be instructed in the importance of their proper and efficient use.

Men should be induced to dispense with large mustaches which overhang the lip, and which are almost invariably soiled when expectorating.

In most families we can secure separate dishes, eating and drinking utensils, and toilet articles for our patients, and these should be distinguishable by their form, material, or color. When the family seemed disinclined to provide them I found them readily forthcoming on explaining to them the danger they, themselves, were liable to, in using such articles in common with the patient, without being thoroughly cleansed and disinfected, but even the separately kept articles should be cleansed in boiling water after being used.

In the same manner we can insist upon separate washing of linen, and the use of boiling water for this purpose; and in all these matters we must simply arouse the self-interest of the people sufficiently to obtain compliance.

On the whole, patients are comparatively easily controlled when at home and indoors, for we have the element of personal fear, and of solicitude for the welfare of their friends to help us; but in our efforts to control them while away from the premises they occupy, when personal considerations and interests are less potent factors, and when supervision is absent, we meet often with great indifference.

With tuberculous discharges of other parts than the air passages nothing less than the strictest antiseptic methods of surgery should be permitted, with destruction by fire of all removed dressings.

Ordinances of town and city authorities against promiscuous expectoration in public places are desirable if for nothing more than to limit the disgusting habit of spitting publicly every where, and they are especially desirable in health resorts. The city of Asheville has made the first effort in this regard: in 1896 an ordinance was adopted by which public buildings and hotel corridors must be furnished with cuspidors to be cleansed and disinfected under the direction of the board of health. Expectoration upon side walks is also forbidden. Non-compliance involves a fine of one dollar.

This of course permits expectoration into the open street, but the real danger from such expectoration, if any exist, is a limited one, as under its exposure to sunlight, the germ is not likely to survive long enough to become dry and enter the air as dust.

Compulsory disinfection of at least such rooms in which tubercular patients have died, and in time of all sleeping rooms, which have been occupied by tubercular patients before they are used again, would commend itself to public opinion, and, I believe, could be readily obtained if the subject were persistently brought to the attention of the proper authorities.

The same is true of disinfection of sleeping cars or at least of their carpets, linen and blankets; and if a beginning could be made with sleepers running to popular resorts for consumptives, the extension of the method to all cars would follow in due time.

But for all these and other reforms, the initiative must come from the medical profession, of which each and every member has his power and influence which if combined throughout this country could accomplish astonishing results,

Must we, indeed, invoke the element of selfish interest in our own ranks also, and is it necessary to point out the great number of lives which tuberculosis claims among us as a profession, and among the members of our immediate families?

It is self-evident that every physician and those whose interests are more particularly dear to him are equally exposed to the carelessness of our patients; and physicians who treat and visit such patients in their rooms are exposed almost as much, only for a shorter period of time, as are the immediate friends and relatives who occupy the rooms and house jointly, with careless consumptives.

A word of caution to dental surgeons, seems also in place here. Unfortunately dental surgeons are still ignoring the lessons and benefits which aseptic procedures in general surgery have taught and conferred, and to find a dentist who really disinfects or sterilizes his instruments would prove a rare exception.

All physicians familiar with the disease under consideration know, how rapidly the teeth decay under the general mal-nutrition accompanying it; and how frequently tubercular patients require to consult their dentists.

In health resorts like Asheville the larger part in any dental practice comes from visitors who are subjects of tuberculosis.

To think that instruments used in the mouths of other persons, tubercular or not, are cleansed by simply dipping them in a little cup of water, exceptionally, perhaps, containing a few drops of carbolic acid, and wiped with a cloth or napkin in common use, before being put into the mouth of the next patient, is revolting. We might as well consent to use tooth brushes in common with others. When, however, the patient has tuberculosis or syphilis, the practice becomes not only abhorrent, but dangerous.

Since the dental surgeon is not likely to make a diagnosis of the presence or absence of pathogenic micro-organisms, in his patient's mouth, there can be but one method for him to pursue, and that is sterilization of all instruments before they are again used.

Indeed, most physicians would now discontinue to refer their patients to dental surgeons who refuse to sterilize their instruments, if only there where those, whom we could recommend because of their safe practice in this respect.

Preventive measures for the spread of infection from man to man will at the same time accomplish the prevention of communication of disease from man to animals, thereby limiting infection of man from animals.

While having no direct evidence, I believe that I have observed at least one instance where tuberculosis was apparently communicated to a herd of cattle through the reckless expectoration of a consumptive who had charge of it.

Theoretically, we can readily see how this can occur, and we should not neglect to caution owners of cattle of this danger.

The preventive measure for our protection against infection from animals can and should be more radical, and therefore more effective.

Before the advent of Tuberculin, as a diagnostic agent, little or no attention was paid in this country to the danger which threatens us from tubercular animals; and the inspection of meats before they are exposed for sale is, except in some of our largest cities, still a matter of the future; though over 20 per cent. of all cattle and many swine suffer from tuberculosis, to say nothing of other diseases which make their flesh unfit for use.

If, non-interference with dangers which threaten the public health on the part of the local or state government, is part of its democratic policy, the parental policy of some European govenments is to be greatly preferred.

The frequency of glandular tuberculosis in childhood, a period of life where milk forms a large share of the diet, the probability that pulmonary tuberculosis in the adult is frequently secondary to the glandular form of childhood, the long periods of latency of tuberculosis, especially in the lymphatic and glandular structures, all seem to point to this source of danger. If it is, moreover, true that in extreme northern countries, where there are no cattle, or where they are scarce, tuberculosis is either not observed at all, or rarely encountered, the danger of infection through their milk and flesh becomes all the more a matter for serious consideration; although there may be other explanations possible.

Commendable progress has, however, been made in protective measures against infection with milk through the actions of everal Boards of Health, particularly in Massachusetts and New York: and their example should be speedily followed in all states of the Union.

For the prevention of infection from animals we can more easily get proper legislation; and its effectiveness can reach such a degree that we need not question the result.

We must simply destroy these animals wherever found, and thoroughly cleanse and disinfect the stables in which they have been kept.

Until the state takes cognizance and brings into operation general, obligatory inspection and testing of animals, and of food products derived from them, through its especially appointed experts, little progress can be made; and all we can do is to advocate such a necessity.

To make a reliable test with tuberculin, the first condition is that the specimen to be used shall be of a known, uniform standard, which so far is by no means the case; a number of specimens of Tuberculin imported by me from Germany, as well as those produced in my own Laboratory, showed in several instances sufficient variation in their power to produce fever reactions, that a certain dose of one specimen may fail to produce fever when tuberculosis exists, while a like dose of another may cause a fever reaction simply from its excessive toxic effect in the absence of Tuberculosis.*

Before injecting the Tuberculin, the animals are best kept in the stable or enclosure for 24 hours, and there thoroughly inspected as to the state of nutrition, presence or enlarged glands, and of kernels, and nodules in the lymphatics, and in the bags of milch cows. Their temperature is measured every three hours in the rectum with strong, large self-registering instruments, which must be well oiled and carefully introduced. The number of respirations are counted and complete records are made of all that is observed.

Beginning this inspection at noon, we are ready to inject the animal to be tested late in the evening. Animals which show temperature above 102.5 deg. F. must be excluded from the test, reliable results being doubtful; and all such animals in which the diagnosis of Tuberculosis has been made by the preliminary examination are also excluded.

The injections are best made with a strong syringe holding about 5 c.c., for those who have occasion to test many animals, an instrument which admits of the use of a short piece of flexible rubber tubing between the needle and the syringe will be found convenient, as there is less danger of breaking the needle, in case the animal should be more or less unruly. The loose skin of the neck is the best point for injecting, and if the syringe is of sufficient size, a ten per cent. solution of tuberculin should be preferred.

The amount to be injected of a standardized solution is one-half cubic centimeter of the full strength (therefore 5 c.c. if the ten per cent. solution is used), for an adult animal weighing about 1000 pounds. Calves should receive one fifth, yearlings two-fifths and heifers three-fifths of the adult dose, while very large animals such as oxen and bulls receive six or seven-tenths of a cubic centimeter of the undiluted tuberculin.

Since the reaction does not usually occur before the expiration of 12 to 18 hours, measurements of temperature are not required during the night, they should be made at intervals of three hours beginning nine hours after the injection, and continued until the expiration of 24 hours.

All animals which have shown an elevation of two and a half degrees, or maximas above 104 deg. F. must be considered tubercular and they must at once be separated from the other animals.

Their milk should certainly not be used without being first boiled, and the like holds good of the beef if the animal is butchered.

Animals which were excluded on account of the presence of fever and those which reacted with only a slight increase of temperature should be suspected, and the test with a moderately increased dose for the latter should be repeated after a lapse of two or more months. Tubercular animals which have been tested with Tuberculin do not always give reaction when the injection is repeated earlier.

Apart from the actual presence of tubercle bacilli, the milk from tubercular cows may contain toxines which in small infants may cause serious disturbance by producing symptoms similar to those we can obtain from the injection of diagnostic doses of Tuberculin in man; namely fever, and gastro-intestinal disturbances.

May this not be at least one of the explanations for the frequently observed fact in infant feeding, that the milk of certain cows seem to agree better than that of others? Boiling of such milk or sterilizing it would of course, not materially interfere with the toxines it contains, since they are not destroyed or changed by a boiling temperature.

*Within the last year we have learned to standardize our crude, Tuberculin products, so that the quantity of toxines is constant, by continuing its concentration until a certain dose produces fever in, and, a certain larger dose causes death in 48 hours of, the animal which is known to be in an early stage of tuberculosis.

Among the bovine species, the disease is believed to spread chiefly through fæcal matter, and secretions from the air passage.

The milk may also convey germs to the calf, but calves are not as frequently found to be tubercular as are adult animals. Tuberculosis once established in a herd of cattle, the greater number become eventually infected.

In the absence of national or state legislation individual communities do not need to wait for its accomplishment. Every city or town government and every board of health can inaugurate this protection for its own locality; and the resident medical man, should have sufficient influence if persistently and earnestly asserted to obtain the necessary ordinances.

There is, however, a special duty on the part of the State, which it cannot escape on the grounds of "interference with individual rights," which is claimed would result, should there be laws enacted and enforced to prevent the spread of consumption.

I refer to the responsibility of the State in its duty to those whom it has already deprived of their individual rights, and from whom it has taken the means of self-protection against the acquirement of the disease by enforced confinement in public institutions, such as lunatic asylumns, poor houses and prisons; and for whom it frequently fosters conditions which favor its acquirement.

As to lunatic asylums, the reports from such institutions show a great prevalence of pulmonary and other forms of tuberculosis, and as an illustration of it, I quote from the paper of Dr. J. W. Babcock, Superintendent of the South Carolina Institution, on "the Prevention of Tuberculosis in Hospitals for the Insane,"† as follows:

"Careful observation and inquiry show, "that the disease prevails in some wards of "the old building erected in 1822, and now "occupied for the most part by colored wo-"men; in the section of the new building "erected in 1856, now assigned to white "men, and in certain wooden pavilions oc-"cupied by colored men and women. The "remaining 18 wards for white men and "women are free from the disease. Prior "to 1868 few negro patients were admitted "and records of phthisis are rare; since that "date there has been a steady increase in "deaths from tubercular disease. In 1883 "with an average population of 564, there "were ten fatal cases of tuberculosis, while "in 1893, there were thirty-nine deaths "from that cause in an average population "of 764. That is in the decennial period "the population increased 35 per cent. and "the mortality from tuberculosis 290 per "cent."

The fact that this enormous increase in the mortality is chiefly in the negro race, and that these negroes are confined in the infected old buildings and pavilions, of which Dr. Babcock says, that the bed-rooms are small, poorly lighted, and ventilated, and that from a modern sanitary standpoint these buildings are typical of what they should *not* be, shows therelation of unsanitary condition to the ubiquity of the germs on one hand, and the frequency of infection under such conditions on the other.

The disease being also prevalent in the building erected in 1856, and before much attention was bestowed upon sanitary requirements, and which is occupied by white men, proves, that both white and colored people are influenced by the same conditions, the remaining 18 wards of modern construction being free from the disease.

It is quite similar, and perhaps worse in poor-houses, and in penal institutions, in a large number of which the hygienic conditions are lacking in many and often in almost all directions. We find, therefore, that these institutions show an enormous mortality from the disease; and the frequency of its development appears to stand in relation with the duration of the time of confinement, under which the resisting power becomes reduced from want of out of door life, from poor or insufficient food, and from the moral depression incident to the mental disease, or the sense of degredation and shame of poverty, crime and association.

The subject of the prevention of tuberculosis in such unfortunates, becomes thus a most serious one, for the consideration of State authorities and for those who have charge of the administration of our laws.

If, as in the South Carolina institution the insane inmate is almost sure to contract the disease, by reason of the infection of, or the unsanitary condition of certain buildings, or if the sentence to confinement in a penal institution for a term of years may in fact be a death sentence, especially if the prisoner is already predisposed to, or if he suffers from the disease in a latent form, there is certainly a plain duty on the part of the State, namely, to use every precaution that is possible, under existing circumstances, to prevent such an occurrence, and to guard the health of those whose mental disease requires their removal to special State institutions, whose poverty and infirmities make them objects of public

†American Journal of Insanity, October, 1894.

care, or even of those, for whom it seeks the accomplishment of moral reform.

The provision in either case of a sufficient quantity of pure air, and sunlight, and of out of door life and exercise, of enough wholesome food, the enforcement of bodily hygiene, and of preventive measures, the disinfection of rooms, especially of hospital wards, the sanitary perfection and improvement of the buildings in all details, are duties which the State should no longer ignore though it may have no direct responsibility to those who suffer from neglect. The non-compliance with this duty makes it doubtful, or at least debatable, whether in case of crime, and its punishment by imprisonment, society has been the gainer, if at the end the prisoner is discharged a hopeless consumptive, scattering infectious material during the rest of his life.

The foregoing propositions for the limitation of infection with the specific germ have all been made, again and again, by others, and by myself, and similar, perhaps better measures, will come up for consideration in the future. It seems, however, that if the profession were to spend less time in contemplation of the exact amount of good to be eventually derived from one or the other, or from possible modifications and improvements in their details, and began to act by strongly insisting upon a course which in the light of our accumulated knowledge and experience appears reasonable and feasible, we, ourselves, might hope to see the time when the fruits of our labors would appear in an appreciable reduction of the mortality from Tuberculosis.

Efforts to prevent the dissemination of the germ derived from tubercular patients either in secretions or excretions, and discharges, or from tubercular animals in like manner, and in food products, will still hold out better prospects than we can hope from the other methods of limiting infection; that is *The Prevention and Eradication of the Predisposition for its Acquirement.*

In this we must of necessity fail in those instances, where the constitution is permanently impaired or when the peculiar vulnerability of tissue by reason of heredity, is so great, that the task of changing it to one of sufficient resistance is beyond our power.

Such subjects we may still seek to protect by advising an out of door life, in rural districts and elevated regions where they are least likely to meet with infection, but in all cases the preventive measures must begin in the earliest infancy.

The many difficulties which we must encounter in attempting to raise the resisting power to tubercular infection in at least one-fifth, if not more, of all people, must appear even upon most cursory examination—and those who are even slightly acquainted with human nature will see at once, that inasmuch as success will almost entirely depend upon voluntary action of those whom we seek to benefit, there will be comparatively few, who will consistently follow the course which will eventually accomplish an appreciable result.

Most, if not all people, are ready to admit that a mode of life and conduct under which the greatest possible vigor and vitality shall be secured and maintained is highly desirable; that true happiness as well as the comforts and pleasures of life can only be obtained and fully enjoyed in the presence of good health, that the want of such vigor and vitality of body and mind is a great hindrance if not an absolute bar to success in life in any direction; and that our propositions for their attainance and continuance are excellent and should be accepted and acted upon by every body.

Yet the degree of will power, and self-restraint to cause proper action are possessed at the present by but a minority, and with the rest, the admission of the truth and perhaps a good resolution never to be followed by consistent action, or to be disregarded sooner or later, in all that is attainable.

Discouraging as this may appear, we must, however, not forget that it is only the continued advocacy of what is just and right to self and others in past centuries, which has made the present advances possible; and although growth in the right direction is slow, it would cease and might become retrogressive, if we stop fostering it.

Although consumption is a disease uniformly feared by all people; yet there are few who do not expect to escape its acquirement; and even if we had a sure and harmless method of vaccination against its contraction, like that for small pox, there would be those who would delay in protecting themselves until the danger appeared imminent; and many persons would be overtaken unexpectedly.

The hereditary predisposition to disease in general, or to tuberculosis in particular, and the influences which have contributed to its presence in those now suffering, are a matter of the past.

All that we can now do, is to consider the means by which we may erradicate their effects, for the benefit of existing and future generations.

If we consider the state of things as we find them, we must conclude that the de-

gree of individual resistance is capable of improvement in almost every person; with exceptions only in those who have already accomplished the ideal, and in those in which degeneration from disease, or from adverse, moral and physical causes has permanently and hopelessly wrecked their organism.

I can here deal only with the more potent factors for the removal of which there is reason to believe that our advice will meet with more or less compliance.

To begin with those who can be presumed to have inherited a predisposition to the acquirement of tuberculosis, because of the physicial degeneration of their more immediate ancestors, manifest in one or both parents by their contraction of tuberculosis, or of other severe chronic, exhausting disease, we find that such predisposed individuals do not necessarily betray their diminished resisting power during the period of development and growth; and we see that many children of such parentage grow to adolescence or to early man or womanhood with apparently good health.

Frequently, however, we note evidence of faulty nutrition at an early period; the children are delicate, and weakly, and though often bright and intelligent, the physical development is retarded, in one or several directions; often there is an early and persistent tendency to catarrhal affections; sickness is usually severe, and convalescence protracted; glandular and lymphatic engorgement or enlargement of visible glands is not uncommon.

It seems probable to me that many of such so called delicate children are in fact already suffering from tuberculosis of the lymphatic system; and that the delicate state of health and nutritive deficiencies are an expression of the latent or obscure disease; while those who grow up with apparently good health, and break down as young adults, escape infection until a later period.

In all such predisposed subjects preventive measures should begin at the earliest period; and even during gestation, every effort should be made to improve and maintain the mother's physical condition.

If she is, herself, tubercular, she should not nurse the child, not only because of danger from her milk which rarely contain tubercle bacilli, but for own sake; inasmuch as the drain upon her by lactation will favor the progress of her own disease though it is in an early and latent stage.

If she is, however, so far advanced in the disease that her sputum contains the specific germ, then she is exceedingly liable to infect her child under the close contact which must necessarily exist; and her milk while it may not contain tubercle bacilli, may contain toxines, and is probably deficient both in nutritive quality, and in quantity.

A tubercular mother in a stage of the disease where there is expectoration should therefore have little or no contact with her child, which, if it cannot be given in the care of healthy persons away from the home, should be kept out of her room; and should under no circumstances be permitted to lie, creep, or play upon her bed or upon the floor; the danger of its infection being altogether too great, even if ordinary precaution as to the disposition of sputum are observed.

The excess of tubercular disease in the children of consumptive parents as compared with those in which the inherited predisposition is due to other disease, is undoubtedly in part owing to infection in early childhood with the tuberculous discharges of the parent.

The general rules of infantile hygiene must be especially observed in predisposed children, particular attention being given to proper food, clothing and to out of door life, when the weather is favorable; their rooms should be sunny and well ventilated when kept in doors.

Well regulated exercise of the muscular system especially if practiced in the open air is one of the most important preventive measures against the development of phthisis and its benefits are universally conceded. The good results from it have been so uniform in predisposed subjects, and also in such as already suffer from the latent disease, that the observation has erroneously led to the adoption of severe physical exercise in the existing active disease, with much detriment to such patients.

The invariable increase of general, muscular growth and strength under regular exercise is highly conducive to increase of all the nutritive process, through stimulation of the entire circulatory apparatus, and of the nervous system, which is followed by increased oxidation, elimination and absorption in all organs and therefore by better appetite, and by better sleep.

By its employment the respiratory apparatus is especially called into activity, the ventilation of the lungs becomes better, the chest movements become free and easy and the vital capacity increases; complying thus with the well recognized principle that perfect functional activity of organs is essential for preserving their structural integrity.

Children up to the age of adolescence need rarely to be urged to take such exer-

cise. They obtain it in all essentials by their out of door sports, and amusements; but a wise supervision by parents or teachers to prevent excessive fatigue is frequently necessary, and special provisions for its maintainance in inclement weather and during the winter months are essential.

A large, well ventilated play-room can be especially provided by parents who can afford it, and people who are limited should furnish whatever sunny room they have in the house to be used for the purpose.

The use of special gymnastics with the view of more particularly developing the muscles of the neck, shoulders, and of the chest will be found useful in those cases in which there is a tendency to drooping shoulders, or in which the physical development of the chest is faulty.

Such exercise requires the supervision of a competent teacher who understands the anatomical and physiological relations, without which the practice is not of sufficient interest to be carried out frequently and persistently; nor is it likely to accomplish the object. For a more particular description of such supervised exercise the reader is referred to Dr. Butler's paper (1) on "Exercise as a Preventive of Phthisis."

The special kinds of general exercise must of course depend upon the age of the child, as well as upon time and season. Bearing in mind the object of muscular development and growth in connection with the inhalation of pure air, it is easily adjusted to the particular case and to the attending circumstances.

If children are expected to be benefitted from exercise their clothing must be loose so as to permit freedom of action, and especially should there be no constriction about the chest and waist, a matter to be watched in all cases, but particularly in girls. The material for outer garments may vary to suit tastes and ideas, but next to the skin, it it should be wool,and however thin the fabric may have to be for comfort in warm weather, this is essential throughout the year.

When the age for attending school arrives the physical development must have precedence over mental training; and with the class of children under consideration, it is often best to delay the attendance of public school until they are a few years beyond the period when this is usual; especially if a moderate degree of home instruction is available, which should be limited to a few hours a day.

No home or night study should be permitted, when the child is regularly attending school, and every hour of favorable weather should be spent out of doors in play and physical recreation.

It is far better that a year more shall be spent in the mastering of the elementary branches, under the careful fostering of physical development, than to arrive at the age of puberty a delicate, though very bright child.

The hygiene of the school room is also a matter of great importance, and a teacher's certificate should be a guarantee that the holder is acquainted with its principles, while all superintendents of schools should be proficient in its theory and practice, and be required to conscientiously enforce it.

When the period of adolescence is reached, we are apt to look upon the continuance of out of door play as childish or frivolous, but regular, moderate, and systematic out of door exercise is ever a safe-guard in the maintenance of good health for all people, and at all ages; skating, walking, horseback riding, dancing in the open air, and other out of door sports short of excessive strain and fatigue should be encouraged in both sexes; and according to the particular choice and age of the individual such exercises in one or several forms should be cultivated even after the period of greatest danger is passed.

In thus insisting on the value of exercise, we should not forget the necessary rest, and opportunity for recuperation in sound sleep. Especially in growing children, and young adults must the hours for sleep be liberal, and an early bed-time is essential.

The predisposed individual should from early childhood have a daily bath in cool water, of a temperature not exceeding 80 deg. F., or lower, even down to 60 deg. or 55 deg., according to the readiness with which the circulation reacts to the degree of cold applied. Even with very small children of an age from one year and upward, it is conducive to vigor and preventive of contracting cold, to gradually reduce the temperature of the daily bath below that of the body.

Since pulmonary tuberculosis develops in an active form most frequently in young adults, the extra precautions for the predisposed should not be relinquished until after the age of 24 or 25 years, when if the proper measures have been conscientiously observed, and a proper choice in occupation has been made, the danger of its subsequent contraction grows much less.

The proper selection of boarding schools for young girls and boys is a subject of great importance, and an unfortunate choice may entail conditions beyond remedy and repair.

Apart from its educational and moral ad-

(1) Transactions American Climatological Association, Vol. X.

vantages, and its location in a comparatively good climate, the quantity and quality of food supplied and the physical training, incident to education, should have at least equal consideration.

The food is all important even in those, who are not specially predisdosed to disease, and by its deficiency, or by its poor quality, at a period when the organism is in its greatest nutritive activity, and makes therefore the greatest demands, the predisposition to tuberculosis may be readily acquired.

But if the individual is already predisposed or suffers perhaps from the latent disease, and if there is not a sufficiency of good and palatable food, at this time, all previous efforts will likely prove insufficient in preventing its actual outbreak.

Many boarding schools for boys and girls receive pupils at rates, which are so low, that "good feeding" is simply impossible, and while I am in sympathy with all educational efforts, I believe that there are few instances in which the pupil's interests would not be better served by dispensing with their services; in this belief I am justified by my experience with a large number of young persons, especially girls, whose decline in health, and the advent of tubercular lung disease appeared to stand in relation with the poor and insufficient food at their boarding schools.

Although higher education may be within their reach, it should certainly never be pushed in predisposed subjects; and the collegiate course should be taken preferably in schools which have the advantage of a favorable climate as well.

More time should be given for its completion than is usually provided in the curriculum of our colleges, in the conscientious compliance with which there is an implied amount of indoor study and labor which would in itself seriously endanger the youth's health; if to this is added the disadvantage of late hours, spent in social enjoyments, or perhaps in dissipation, the escape of disaster becomes simply a matter of fortunate accident.

In the choice of occupation, one which assures the largest share of out of door life, but with a possibility of avoiding exposure to inclemency, or to severe extremes of weather, gives the greater prospect for escaping the disease, the more favorably the general features of the climate of the locality may be.

In the choice of any calling the probability of success or failure, with the mental states thereby induced as to contentment, or worry and anxiety, needs to be considered; and it is not advisable to force or coerce a youth into a pursuit for which he has no interest or inclination.

In individual cases the social status of the family, and their financial resources will enter largely into the particular choice. In a general way, all those occupations which assure the greatest freedom from nervous strain and worry, and under which a residence in a dry, salubrious climate away from the crowded cities and densely populated districts is possible, are to be preferred; while those which favor affections of the air passages from inhalation of irritants and dust, or the acquirement of actual infection should be strictly avoided.

The professions, if eventually to be practiced in rural districts, may be classed with the favorable occupations, the greater danger to the individuals being rather in the college preparation than in their pursuit. They also allow much choice as to climatic advantages, and we indeed find many members of the medical, legal and clerical professions in active pursuit of their vocations in sections and States in which the climatic conditions are highly favorable, who have been either predisposed or have at one time given evidence of the presence of actual tubercular disease of the lungs. The immigration of predisposed individuals and families from unfavorable to relatively better climates before sickness overtakes them should be much encouraged, and advised whenever occasion presents itself.

In this respect the territory of the United States offers a large choice, which, however, must often depend on finding means for support. While popular sections for the climatic treatment of phthisis, may also be considered for predisposed persons, the presence there of many actual sufferers from the disease must be thought of, especially in the absence of proper preventive measures for the spread of the disease Apart from such popular resorts, there are many less celebrated sections in which the predisposed subject will find the essentials for his purposes, and often with less sacrifice in expense for travel and with even better opportunities for making his way.

Locations having a dry soil, short and mild winters, and no great extremes in temperature, where out of door life, and during most of the entire year, open windows and doors are consistent with comfort, where the cost of living is less than at health resorts, especially at such as are remote from centers of supplies, seem to me to meet every requirement of protection as far as climate is concerned.

If land is cheap many mechanics may find it equally profitable to learn to follow agricultural pursuits instead of continuing

in their particular employment in towns or cities.

Such localities exist particularly in some of the Southern States, and large areas, as for instance the celebrated Piedmont section are offering advantages incomparably better than we could possibly find in the eastern and middle States, where the climatic conditions of at least some portions are highly unfavorable, and where land is comparatively dear.

People who for any reason cannot or will not seek such localities may, however, still improve their conditions in their own State or in their more immediate section of country, and striking differences in healthfulness, especially with reference to dampness of soil and air, may often be found in the same village or town.

The dwellings of the laboring classes are too frequently located without regard to considerations of healthfulness, and those who will not or cannot consider more distant advantages should at least seek dwellings situated on comparatively dry soil, with cellars that can be ventilated, and with plenty of opportunity for sunlight, and they should particularly avoid houses in which a consumptive has recently lived or died.

In more direct professional relation with predisposed patients we must be very watchful in the care we give them when ill, even of the supposed slighter ailments, and especially when the affection is one which involves more directly the bloodmaking, digestive, and respiratory organs.

Many times we have occasion to observe that such patients are more severely affected by a cold, or an attack of diarrhœa than others, and betray a lesser degree of resistance and recuperative power when ill, which may not have attracted attention in their usual state of health. If their illness should drift into a prolonged or chronic course, resistance to infection becomes necessarily still further diminished, and their increased liability to contract tuberculosis exists over a correspondingly longer period of time.

Thus we see that anæmia, or chlorosis of young girls, or the infectious and contagious diseases of childhood, and typhoid fever in young adults, often precede the advent of tubercular disease of the lung; because of infection occurring during their existence and during retarded convalescence, or because a latent tubercular deposit has been excited to activity by the inflammation in the lung, or by the failure of the general nutritive processes.

It is not always easy to distinguish between those who are simply predisposed, and those who have already succumbed to infection; in practice it is often impossible, especially when such patients come under our care for the first time. In such cases it is however best to adopt every precaution which we would for the predisposed, and for those with latent tuberculosis, until a full convalescence shall be permanently established.

Whatever view may be taken as to the relation of scrofulosis and tuberculosis, there is no room for controversy that scrofulous children become subjects of pulmonary tuberculosis more frequently than do others, and this fact alone would justify us to consider them most strongly predisposed to the appearance of the disease in the lungs.

Every measure, therefore, which has been suggested for the eradication of the inherited predisposition must be most rigidly carried out if scrofulosis exists in any of its forms, and even those who doubt its identity with true tubercular disease, will do well to give such advice and care for that class of patients, under which they are on the side of safety.

In all cases, however, where there is so-called scrofulus diseases of the glands, joints or bones, we must insist upon their tubercular character, and upon the infectious nature of discharges coming from them, and apart from their proper treatment, we have the additional problem of preventing extension of the disease to the lung, or to other vital organs.

Whenever the radical removal of all tubercular tissue is possible this is of course the best preventive measure.

The difficulty in those cases is, however, that as a rule, the local and accessible tubercular process is not the only one present, and while we are extirpating a tubercular gland or remove a carious portion of bone there are in all probability other tubercular localizations which are beyond our recognition, and therefore beyond surgical relief.

While this is true, I still believe that early surgical removal of tubercular glands in the neck is particularly indicated on account of the danger to the lungs which in many cases that have come under my care, became apparently implicated by the downward extension of the glandular disease until the upper lobe of the same side became also involved; in tubercular affections of bones and joints except in their early beginning, and before destructive changes have been initiated surgical measures only, offer any prospects for life or limb.

If surgical aid is not feasible and suppuration is present, we must still endeavor to protect the patient against further infection with his own discharges, by observing the

strictest, aseptic precaution in the local treatment.

Dissemination through absorption of tuberculous material we must seek to prevent by free drainage and by all those general measures which we would emyloy if the disease were of the pulmonary form.

The occurence of pleurisy, whether dry and circumscribed, or acute with exudation in predisposed subjects may invariably be considered as tubercular unless the contrary is absolutely proven, which can but rarely be done; even when occurring in connection with other acute disease, in those whose family history is faultless, it is still best to follow a course which can bring the greatest benefit, and do no harm. No matter how well the patient may apparently have recovered, our advice should be the same as we would give a patient with latent or arrested tubercular disease of the lungs.

Still more difficult and less prospective of success we find our position in *preventing the acquirement of the predisposition to tubercular disease.* We could lay down the rule in a few words, by stating that those having been fortunate enough to inherit a strong, and vigorous constitution, and who would protect themselves further against its loss must simply live a perfectly moral and a normal physiological life, and if they would transmit such an heritage to their posterity, they must secure a husband or wife morally and physically their equal.

Although the contemplation of such a course is, at this stage of human thought and action, a chimerical fancy, and its ordinary adoption a matter of the distant future, yet since men have on the whole grown better, in all directions, which lead to an ideal life, and the minority, however small which are approaching it, is on the increase, its suggestion may be pardoned.

With the great majority there is little prospect for such proper and consistent action which shall assure the greatest degree of health. Even in our profession we meet constantly with examples where excessive devotion to duties with incident exposures, or perhaps bad habits, have brought about serious physical deterioration and in consequence the advent of tubercular disease.

Not until our modes of thought, reason and feelings, have been so changed that we can readily desire to exchange more immediate gratification for the prospects of continuous good health and longevity will there be any prospects for material change.

There are, however, some things that we can do, and the few practical suggestions which I offer may help those who are in danger of losing their inheritence before it comes into their own keeping.

I refer to the feeding and hygiene of infants under the present tendency to reach out for artificial foods, and for substitutes for the mother's milk, or for that of a healthy wet nurse.

There is no doubt that, such infants who survive under artificial feeding have often been seriously and perhaps permanently injured, if not already infected, and mothers should not be lightly excused from the duties of maternity.

If artificial feeding becomes imperative, we should not abandon the use of milk, previously ascertained to come from a perfectly healthy animal until we have thoroughly demonstrated that, although this is the case after sterilizing and properly proportioning it, it really cannot be borne by the infant.

It has been my observation that mothers and physicians often conclude too quickly, that the particular milk does not agree: in many instances the gastro-intestinal disturbances attributed to the milk have been set up by giving it in excessive quantity, by using milk which has undergone fermentative changes, or by feeding the baby other things unfit for its digestive organs.

In others the interference with proper digestion by sickness, especially of a febrile character and from other causes, is lost sight of, or is not sufficiently appreciated, and the solicitous mother who measures the degree of illness and improvement by the relative amount of food taken by her child, is very apt to err in taxing its digestive powers beyond endurance at a time when really very little can be properly digested.

The digestive organs once in a state of irritation or catarrhal inflammation, are no longer tolerant as they were before, and even the most perfect mother's milk will now be likely to disagree, if freely given. Instead of changing from the mother's milk to cow's milk, or from the latter to artificial food, the indication is, to restrict the amount or to abstain from feeding altogether for such time as the conditions in the particular case require.

Many infants are thus launched upon the artificial feeding process in just this manner, without real justification, to be thereafter exposed to the perils which attend it, and though frequently carried through, to the period when other foods can be digested and assimilated it has been at the cost of more or less permanent injury to the child's constitution.

For the proper nourishment of infants there is as yet no perfect substitute for human milk, and the nearest we can approach an equivalent is with milk from animals which in this country at least must, as a

rule, be cow's milk. The latter is also the best food with which we can supplement the demand in quantity as the child grows older and larger, or as the maternal supply becomes inadequate. Eventually cow's milk takes the place entirely of maternal milk to be itself supplemented by the gradual introduction into the child's diet of starchy, fatty and nitrogenous foods.

With watchful care and supervision of the child's diet adapted in quantity and qualily to its age and growth, the nitrogenous foods and animals fats are gradually increased to their full limits. If then the bodily hygiene is good and the environment is healthful, and if out of door life and exercise are regularly alternating with proper rest, as heretofore indicated for those who are hereditarily predisposed, we will rarely find loss of appetite, and rejection of fats and meats on the part of growing children.

Parents who so supervise and direct their children's mode of life, and conduct, to the age of full maturity, and who teach them proper self- restraint and generous conduct toward others from infancy have laid a foundation which will be lasting, and the structure will in all probability prove impregnable to the worst enemy of human health and life, "The bacillus a Tuberculosis."

The Treatment of Varicose Veins.

By E. B. Jackson, M. D., Houston, Texas.

This surgical disease is exceedingly common, and was years ago considered very difficult of cure—if not altogether incurable. It occurs considerably oftener in women than in men, which fact is accounted for because of the great number of cases superinduced by the pregnant state. Other very prominent predisposing causes are habitual constipation, long hours of standing upon the feet, and suppression of the catamenial flow.

Of the more direct causes there are (1) pressure, which may be exerted by a tumor, by an elastic garter, and the like, and (2) obliteration of one or more of the larger veins by thrombus—liable to occur as the result of tydhoid fever, gout, or some injury from without. It is believed that not an inconsiderable number of cases occur as the expression of an inherited tendency.

There are no individuals, from any walk of life, who are exempt from the disease.

It is most prone to occur at, or near, the middle age of life.

If a case is seen early in the process of invasion, before many places of predilection have been formed, very much can be done by simple means to obviate its further progress, and improve the already existing lesion.

It is incumbent upon the attending physician to restore any defect which may exist in the hepatic, enterics, or menstrual functions; to enjoin the immediate abandonment of elastics, substituting suspenders, and to adjust a fitting rubber stocking, or apply a roller bandage. If it should be thought necessary, he should insist upon complete rest in bed, or on a lounge, with the limbs slightly elevated for a time. Systematic massage movements, from the foot up the limb, are of undoubted service, since they largely compensate for the want of exercise in the extremities—particularly while the patient is necessitated to remain in the recumbent position. By energetic massage toward the heart, the sluggish venous blood is readily expressed from the limbs, giving place to fresher blood, and likewise resulting in renewed strength to all the structures concerned. The benificent influence of such procedure cannot be too highly rated, and it should be applied to all recent cases with pains-taking care, unless, perchance, there should be a thrombus, in which event massage would, of course, only tend to aggravate the condition.

If, in the face of the measures first proposed, a case should proceed to over-distention of the veins, giving rise to so great pain as to preclude the possibility of continuing such a line of treatment, radical efforts of cure are to be now recommended.

The character of operation to be selected depends upon the location, and extent of the varicosity.

If there is a general dilatation, and torturousness of the veins of an entire limb, which is not often the case, it may become necessary—after placing ligatures—to remove many sections of vessels. If the lesion occupies only a short portion of vein it may be excised, between two ligatures, in toto. If a long portion of a vessel be varicosed it will be necessary to place several single ligatures, leaving them to produce gradual obliteration in many centers. In cases of large protruding varix it may be necessary to place many ligatures before it would be safe to excise it.

The operation of placing single ligatures requires only very short incisions for exposing the vessels, which are conveniently ligatured by means of an aneurism needle —the ligature to be tied firmly and cut off short. The operation for the removal of a section of vein requires an incision two or more inches—according to the surgeon's

desire—whereupon the vessel is isolated by the aid of the fingers and handle of the scalpel, a proximal and distal ligature placed, cutting them close, and the intervening portion of vein exsected. Whenever the incisions have not exceeded two inches in length it will not be necessary to close them with sutures, since an antiseptic dressing, if properly selected and correctly applied, is all that is required. It need hardly be remarked that the most rigid cleanliness should be practiced upon the regions to be incised prior to operative procedure. In the event it should become necessrry to dissect away large masses of varix, a much more extensive incision may be required. It is often expedient in such cases to turn a flap of skin back from the top of the varicosity by making the incision in the shape of the letter U, which will bring the vessels into broader view, and greatly facilitate their ligation. All of the veins leading into the varix will require division between two ligatures, before the mass can be extirpated. In the beginning of the operation it is well to put a tourniquet around the limb, above the seat of the lesion, and make it sufficiently tight to retard only the venous flow of blood, whereby a considerable strutting of all the veins of the tumor is produced—greatly facilitating their isolation and ligation. In the performance of the operation it is best to forego the use of pressure forceps as nearly as possible—substituting the fingers and using gentleness throughout—insomuch, as the vessels, skin, and other structures are weak and friable from ill-nutrition superinduced by long continued pressure. When the mass has been excised the wound should be closed under strict aseptic precautions, using cat gut sutures to be loosely tied, since, if they are drawn taut, the frail tissue may perish and sloughing supervene. In applying the dressing a small degree of uniform pressure should be aimed upon the flap, with the view of obtaining its plastic adherence, at the earliest possible moment, to the substrata of tissue, which is essential to its life—and to the immediate success of the operation.

If primary union is not obtained the case will have to heal more slowly by second intention.

In some instances this may be a tedious process, and it is because of such occasional results that many physicians have condemned the operation.

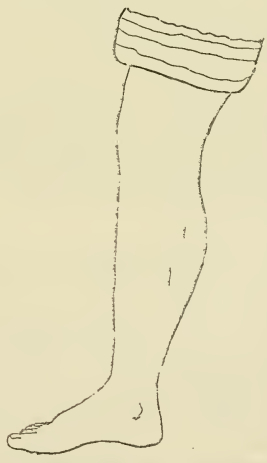
The ultimate results are, however, usually all that could be hoped from any one of the operations mentioned when applied to suitable cases, thereby constituting an ample warrant in the hands of a practical surgeon, since with asepsis he can rob the case of any danger of phlebitis and pyæmia. The surgeon can, if he chooses, avoid another small source of danger to the patient's life by using Schleich's method of anæsthesia by infiltration instead of chloroform.

That the operation can in very many cases be performed perfectly painlessly with the aid of local anæsthesia the author could, were it necessary, cite other cases to prove.

* * *

The accompanying cuts portray one instance in which Schleich's mode was suc-

Showing appearance before ligation.



Showing appearance after operation.

cessfully employed. In this case what is known as Schleich's strong solution was used, namely:

R	Cocaine muriatis...	gr. ii.
	Morphinae sulphates.....	gr. ½.
	Sodii chloridii.....	gr. ii.
	Aquæ destil.....	℥ ii.
	Acid carbolic,...	gtt. ii.

One drachm of this solution was injected, by means of a fine pointed hypodermic needle, into each site of incision, and allowed a margin of probably two minutes to deaden the sensibilities of the superstructures. After the incision was made a blunt curved needle was used for injecting another drachm of the fluid under and about the bed of the vein, thus establishing a state of local anæsthesia, which permitted the easy ligation and exsection of the portions of veins between separate sets of ligatures.

Before concluding, the attention of all general practitioners, desiring to cure cases of varicose veins, is drawn again to the easy manner of operating with local anæsthesia by Schleich's method in the absence of an assistant, or the consent of the patient to undergo general anæsthesia. It will be seen, by reference to the reported case, that only one-half grain of cocaine was administered to complete the operation. Had it been necessary much more could have been used with safety—say the entire mixture of two ounces containing two grains of the drug. Such a large amount of cocaine as that, however, could not be introduced into the blood *instantly* without the expectation of toxic symptoms. But when it is administered in a large quantity of fluid, containing only one-eighth grain of the drug at each injection, which requires some little time for absorption, the heart and brain gradually accustom themselves to its influence, and a state of increasing tolerance is forthwith established. Another very favoring factor in warding off toxic symptoms is the capillary oozing of blood after the incisions are made, by which much of the drug escapes.

Finally, a word is necessary in reference to the character of ligature to be selected for tying the veins.

In almost every instance—with possibly the exception of cases in which only a single ligature is to be placed—the catgut material should be preferred, since it is absorbed after a few days; but not until every purpose to which it may have been directed is accomplished. If the surgeon chooses he may, however, use a much more lasting ligature, insomuch as there is but little danger of suppuration, unless the wound should become infected from outside sources, and this should be entirely prohibited by religious asepsis.

Pneumonia.†

By James S. Burroughs. Asheville, N. C.

Pneumonia is an acute, infectious disease, caused by a specific micro-organism, and is frequently epidemic. It exists in all climates, and at all seasons. A low, damp, changeable atmosphere predisposes to the development of pneumonia, whilst on the other hand, a high, dry climate, with a comparative evenness of temperature, and freedom from sudden changes, offers a fair immunity.

Seitz's large statistics, of nearly six thousand cases in Munich, gives 32% in winter, 36% in spring, 15% in summer, and 15% in autumn; Bell's statistics of the Montreal General Hospital, and others, substantiates this distribution of cases as to seasons.

On a more careful analysis of the statistics at my command, I find that 47%, or nearly half of all cases, occur in the three months of February, March and April; the sudden changes in moisture and temperature, during these months, coupled with the fact that the human economy is already weakened by the prolonged cold and housing of winter, offers the most plausible solution of the above observations.

Age, occupation, habits, food, raiment, and many other causes, influence this disease, and are too well known by medical men of today to merit more than a passing notice.

It is generally accepted and believed that this disease is most frequently caused by the Pneumococcus, which was first observed by Fraenkel, of Paris. One peculiarity of this germ is, that it is found in pairs, hence the term "Diplococcus pneumonia of Fraenkel."

The times are not ripe for quarantining pneumonia, yet, with the existing knowledge of the frequency of pneumococcus in this disease, it is certainly judicious and safe practice to isolate each case, in the institution or family, so as to protect the other inmates. We do know that we see a case of pneumonia in a boarding school or a large family, in a neighborhood where there is no other case, and that in the course of a few days other cases will develop in this school or family; with deep regret and mortification I recall several such instances in my own practice, where no attempt at isolation was suggested; in latter years I have adopted the isolation plan, with complete destruction of all sputum and excreta, with

†Read before the Buncombe County Medical Society, July 5th, 1897.

results sufficiently good to convince the most skeptical.

The diagnosis of pneumonia, and by the term pneumonia, I mean acute lobar pneumonia, is one of the most unmistakable and easily recognized of ailments to which human flesh is heir to; it is difficult to mistake it for anything else, its symptoms are so clearly and prominently marked. As a rule we see these cases during, or soon after, a chill, and find aching of entire body, with localized pain at seat of trouble, crimson spot on cheek, corresponding as a rule, with the side of affected lung, rapid, shallow respiration, with much pain on attempt to get a long breath, frequent disposition to cough which is accompanied by great pain as if a sharp pointed instrument was piercing the side; it is well to note here that this pain is in direct proportion to the amount of pleura pulmonalis that is involved, and throws but little, if any, light upon the lung tissue that is infiltrated. Each inspiration is shallow and short, with a grunt, on exhalation, the rapid breathing is frequently out of proportion to amount of lung tissue involved. The peculiar respiration of this disease, coupled with the bloody or prune juice expectaration, is pathognomonic of pneumonia, even before a physical examination of chest has been made.

Wish to state, that on giving the physical examination, I command patient to take a deep inspiration, and at the same time to place his hand at point of pain, in a large majority of instances, it goes to the affected lobe; my reason for pointing out this fact is, that most authorities refer the pain to nipple, or inferior angle of scapula, whilst my clinical observation do not substantiate its correctness.

A physical examination in the first stage, and by the first stage I mean the first visit, which is in a few hours of the onset of the trouble, we will observe by inspection, not only the rapid, shallow respiration, but less motion of affected side, this is always true if it is the lower lobe, it is absent if it is the upper lobe involved. The lack of use or motion of affected side becomes more noticeable as consolidation progresses; the percussion, note, is of but little value in the first stage, because hepatization or consolidation has not yet taken place, to say nothing of the increased pain inflicted. On ausculation, in this stage, at the end of inspiration, are heard fine, crepitant rales, a series of indistinct cracklings, which is made more pronounced by a deep breath.

After the lung becomes infiltrated and consolidated, by the presence of inflammatory fluids, frequently nothing is heard except bronchial breathing; it is at this stage that percussion is of value in mapping out the area of tissue involved. The run of each stage of the disease is easily kept track of, as the case advances, by the circulation, respiration, temperature, and physical signs.

In adults, almost without exception, pneumonia is ushered in with a chill, whilst in the aged or children, this symptom is rarely present. In the aged delirium is early manifested, whilst in children, the disease may be ushered in with a convulsion.

Pneumonia enjoys the distinction of a more numerous and common pathological complication than any known disease of which I am aware; its complication with grippe, bronchitis, and typhoid fever, is each a study within itself.

At the beginning, a prognosis of pneumonia can never be given, because no man, no matter what his experience, can foresee the amount of lung tissue that may beceme extravasated in the course of a few short hours; as a rule, the crisis is reached by the seventh day, yet we have all noticed new tissue become involved after this date, accompanied by fatal results.

An attack of pneumonia always predisposes a subject to other attacks; it also leaves a fertile soil for tubercular bacilli to make its home, and subsist in the body, until the entire human economy is cousumed, hence the great importance of keeping a watch, not only over the general physical condition of the patient, but actually examining the lungs from time to time for a couple of years after an attack.

Leaving out of the count the mortality of infancy, due to intestinal catarrh, pneumonia stands next in the death roll to the great white plague, of all races and nations, tuberculosis.

In consideration of the above statement, which is substantially correct, so far as my investigations have extended, it is fittingly right and proper that very careful attention should be given to the treatment of pneumonia. Do not allow yourself to fall into a routine habit of prescribing for pneumonia, for just so sure as you do, just so surely you will have to sign death certificates for patients who should have been permitted to have longer enjoyed the blessings and luxuries of this grand old world.

Each case must be treated upon its individual merits, but in the main there are two treatments for pneumonia, which belong to two separate and distinct class of subjects, what is life to one is death to the other, so be careful as to your selection.

These two plans of treatment may be styled the antiphlogistic or depressing and stimulating or supporting, the antiphlo-

gistic or depressing plan consists of venesection or veratrum viride with aconite,and is applicable to fullblooded, robust patients with sound hearts; venesection should never be practiced but once, and that at the onset of the disease. Veratrum viride exerts its good influence by diminishing the blood supply to the affected organ; it tones down the throbbing, pulsating heart that is pumping blood with muscles of iron into a lung that is already inflated and congested, and fast becoming worse with each stroke or rythm of its action. The veratrum and aconite does more than tone down the heart, it throws open the sudorific glands,bathing the patient in a profuse perspiration, inviting the fluids from the centre to the surface, thereby relieving, to a great extent,visceral congestion.

Even this plan of treatment cannot be persisted in longer than exudation has set in, because then supportive measures are indicated.

The supporting or stimulating plan of treatment is indicated in weak, anemic, debilitated subjects, with a weak, rapid circulation. Nitrate of strychnine is demanded in doses sufficient to pull down the number of heart beats, and to increase its power and force sufficiently to keep patient up to par. Strychnine acts best preceeded by nitro-glycerine, so as to cause a dilatation of the peripheral blood vessels, removing as far as possible the obstructions before the heart, so as to give this organ an opportunity to utilize all the physiological effects of the drug.

Carbonate of ammonia and tincture of digitalis is given to this class of patients from the start, brandy is at times of service.

Under no circumstances should quinine, or any of the coal tar products, be administered, for they do not exert any influence on the diseases, but do positive harm by disturbing the circulation, and upsetting the stomach. Hot poultices and cloths do no good whatever; blisters are of no utility so far as limiting the course of the disease.

Fever should be controlled by ice bags to head and chest, with repeated sponge baths.

Pain should always be relieved by small doses of morphia hypodermically, and the atropin should always be omitted, because of its action on skin and kidneys, to say nothing of its stimulating effect on the respiratory centre.

At the outset of the disease the bowels should be freely opened with sulphate of magnesia, in the strong and robust, whilst small doses of calomel are preferable for the anemic and debilitated.

In March and April, 1882, whilst in Colorado, 8000 ft. above the level of the sea, I experienced an object lesson of the stimulating, and the antiphlogistic treatment of pneumonia.

Six miles from my adopted village resided Dr. C.,who was physician and surgeon to several hundred miners.

Eight miles to the left, at another camp, Dr. B. looked after the medical and surgical wants.

During these months Dr. C. had 43 cases of pnuemonia with 21 deaths; he fed and stimulated his patients heavily, from the start, with a mortality of 48%.

Dr. B. had 37 cases of pneumonia with 4 deaths; he practiced venesection on sight, followed by veratrum viride for three days, with scant diet, with a mortality of 11%.

Each camp employed strong robust Irish, who subsisted on strong, coarse diet, living in half dug outs the portion of time they were not laboring many feet under the ground. Surroundings and circumstances equal, results vastly different, attributable to difference in treatment.

Dr. C. was a thoroughly educated man, and one of the best practitioners I ever saw notwithstanding his pneumonia mortality, in proof of which he has, for years, been chief surgeon of a large R. R. corporation.

Dr. B. was an uneducated old man, and was practicing medicine in the State, by reason of his business being established prior to enactment of legislature restricting under-graduates.

Some Practical Methods in Rural Hygiene.

By Harvey B. Bashore, M. D., West Fairview, Pa.

Rural hygiene is a subject very little cultvated in this country, but we are beginning to find that all of us, even the city dweller, have an interest in the sanitary condition of the suburban districts—where seventy-five per cent. of the whole population spend their lives.

Prof. Poore, the eminent English authority on all subjects pertaining to suburban sanitation, advocates the use of cultivated land for the disposal of waste from isolated houses, and the more I study the subject and the more I investigate these questions, the more am I convinced of the soundness of his views, not only theoretically, but practically.

All the waste of the house—the excreta, slop-water, &c.—can be disposed on the ordinary garden bed, which is attached, or ought to be, to each rural dwelling.

For the reception of the excreta, some form of dry closet is desirable, and this should supplant all privies and cesspools. If we could count the days of illness and the deaths in every rural community, caused by these unsanitary defects, it would be appalling.

There are many different ways of making a dry closet, but I shall only describe one which seems to me to be of most general utility.

A pit is dug about three feet deep, which has its two sides, back and front, lined with brick which projects a foot above the surface of the ground; in the back an open space is left for removal of excreta and the admission of sunlight and air. This open space is best covered by some kind of a wire door which, while it keeps out dogs, cats, &c., will be no hindrance to the free circulation of the air. The ground behind the privy is graded so that there is an inclined

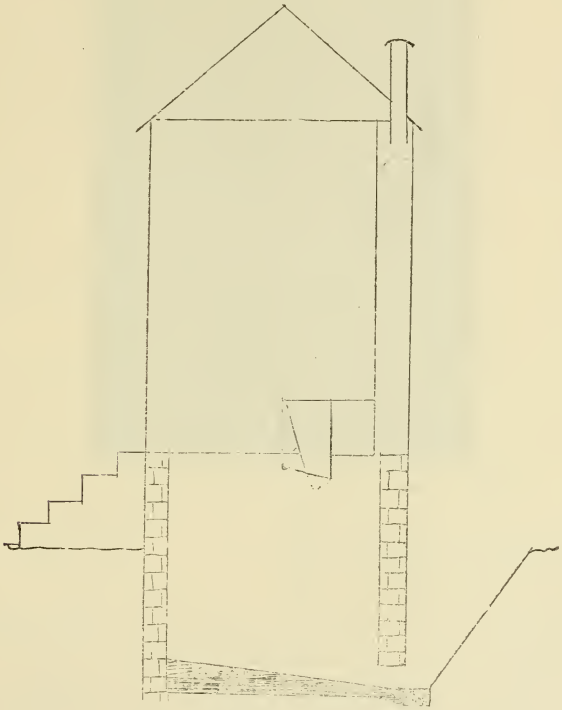


Fig. 1.—One Form of Dry Closet.

path from the bottom of the vault to the surface of the ground. The floor of the privy is concreted and inclined as indicated in the figure. The urine which is voided flows backward into an open gutter filled with some absorbent, saw dust, ashes, or dry earth.

The pan underneath the seat may be made of galvanized iron, and a flap is attached to the lower end to prevent an upward draft. The flap may be balanced so as to work automatically, or may be moved by a chain. After using, earth or ashes is thrown into the pan just as in any other dry closet; in many cases the better way would be to have earth or ashes thrown over the contents in the vault, through the back door, say once every day. Every nine or ten days the material should be shoveled out and buried on cultivated land a few inches beneath the surface. Excreta superficially buried or freely exposed to the air, disappears very quickly.

Slop waters and garbage still remain to be gotten rid of.

The customary way of disposing slops by throwing them on the garden bed is not to be recommended, for when water is contin-

ually thrown on the same place the soil gets saturated with moisture and nitrification is delayed. The proper way is to have the liquid run in some form of a surface drain, which is generally preferable to a subsoil drain, in a southern climate at least. One made of round river stones, or of bricks after the fashion of a street gutter will do very well. This should have some porous material underneath, as ashes or cinders. A

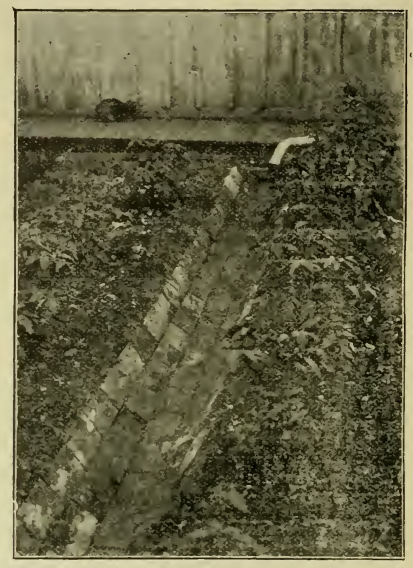


Fig. 2. Surface drain made of ordinary bricks, showing delivery pipe from kitchen sink and bath.

slop bowl is placed in a convenient place and the water is led from this to the gutter by a piece of round roof spouting. If the house has water "under pressure," and a kitchen sink and bath room, all one needs to do is to connect, then place with the drain. In winter of course a surface drain is likely to freeze. The one I have described can be readily protected by covering with some old boards and a little earth.

The solid waste about the house, known as garbage, consists of a combustible part —rags, paper, &c.; a putrescible part— kitchen refuse; and a non-combustible part tin cans, oyster shells, bottles, &c.

The simplest way of getting rid of the putrescible part is to dig a hole about two feet deep in the garden bed and empty the waste into this: if there is any odor it may be covered from time to time with a little earth. This may seem very primitive, but it is really very scientific.

The combustible waste should be burned in the kitchen range, or an open fire place, and the non-combustible part may be used for filling.

Animal Force.

By Dr. Charles Penn Robbins, Winona, Minn.

Animal force or forces are capable of carrying out physiological phenomena or retarding pathological processes.

It is a theme rich in its practical bearing, for without its consideration of diseased conditions, a prognosis becomes fallacious and judgment doubtful. The most striking characteristics of these countless forces are their apparent purpose fulness.

Around us we have to deal with matter and force; the one a subtantive entity, the other appreciable only as a principle of action.

Heat, light, electricity, magnetism, sound, chemical affinity and motion are forces correlative, or have a reciprocal dependence.

Grove in his "Correlation of Physical Forces" demonstrated that one can produce another, and neither could originate otherwise than from some antecedent force or forces.

Mayer, Joule, Helmholtz were themselves

announcing the actual equivalents. Mayer of Germany (1842) approached the subject through physiology. Another the equivalent of heat in mechanical motion. So force like matter can neither be created or destroyed.

"Ex nihilo Nihil fit" and "Nihil fit ad nihilum" form two axioms that must be admitted to be incontrovertable.

As to their origin under the form of heat and light, force is constantly being transmitted to us from the sun, and it is from force thus derived that life on earth originates and is sustained.

To illustrate this origin of force which exists in living tissue is evolved in muscular action has its original source in the food we eat. Now all food comes from the vegetable kingdom, and all vegetable products are built up through the agency of the sun's rays. The energy contained in these rays, which produce the various compounds, is latent within it.

Here begins the conservation of energy. For to living nature it produces its effects through the physical forces, the living matter forming the medium through which it acts.

It is from force thus derived changed and inter-changed that the physiological phenomena are carried out.

Each system of the human economy has its forces constantly at work, Each organ has them as well is each living cell.

Some of the points to be regarded may be considered under the various systems: as the digestive, renal, cutaneous, circulatory, respiratory and nervous.

Under the degestive system we see body metabolism carried out by capillary attraction, osmosis and chemical affinity.

Under the renal system we have secretion carried out by means of arterial pressure ex-osmosis and the forces of the living cells.

Under the cutaneous system we have the invisible perspiration carried out by capillary attraction, arterial pressure and diffusion by evaporation. Under the circulatory system we have the current kept up by the vis a tergo(the heart)which constantly propels the blood along evolving muscular action stimulated by nerve impulse. Which in itself is primarily derived by the action of the mother of all tissue (the blood) upon the endocardium.

Under the respiratory system we have two prominent forces; the evolution of muscular action and atmospheric pressure aided by the elasticity of lung tissue and interabdominal pressure.

Under the nervous system we have nerve impulses constantly being sent out. In the Cerebro Spinal and sympathetic system originates nerve impulses. We trace its origin to the nerve cell, here we find the power of attraction and repulsion of the molecular cells and the expansion and contraction of the neuroses.

If action takes place in harmony we have the normal impulse producing its destined function. If not in harmony we have delusions, illusions, hallucinations and if no action takes place unconsciousness, sleep or paralysis.

Regarding the retardation of pathological process force is used as resistance vitality or immunity. The various processes in the cellular and inter-cellular elements that becomes an exaggeration of its prototype or embryonic fac simile developes and produces hypertrophies of tissue or function, or atrophy of tissues and functions.

Health itself is life on a par value. Disease either passes above or below this par value; one a hypertrophy, the other atrophy of tissues or functions. On the other hand we have the ever constant forces embued in the cellular elements that hinders the developement of disease. Here the vitality sends out its energy to carry out its destined purpose. Some have it to a certain degree, others less and others still less. Around us we see people who have the resistance to withstand pathologic process and others susceptable to some and strong against others, and still others easily susceptible to all diseased conditions.

Animals exemplify this fact. For three dogs of the same weight and breed, you introduce noxious substance of the same virulence and dose No. 1 will have no effect, No. 2 a slight entero-colitis and No. 3 will rapidly pass from convulsion to coma and death.

Not alone is this true of drugs but the same fact can be demonstrated with bacteria. And so with all the etiological factors that produce disease.

The same experiment will give the same results. We see in families tuberculosis, parent and sisters dead, yet a son enjoys complete immunity (neforces) and under the most embarrassing conditions will withstand the invasion of disease.

Thus the forces of nature that each and every one have to a certain degree becomes acquired or hereditary.

Like the black spots on the sun which effect its brilliancy the forces of living tissue effect the carrying out of physiological phenomena or the retarding of pathological processes.

One part of camphor to ten parts of olive oil used hypodermically is effective in ether collapse. One gr. of camphor may be given.

Pulmonary Hæmorrhage.†

By H. J. Chapman, M. D., Asheville, N. C.

Pulmonary hæmorrhage is almost uniformly a symptom of tubercular disease of the lungs.

It is occasionally the first symptom, or at least the first manifestation that causes the patient to consult a physician.

Apart from the slighter hæmorrhages in the very early stage, hæmorrhage occurs most frequently from cavities, and especially those which are of recent formation, and those which enlarge from continuous breaking down of the walls. It is more frequent with the exudate, in a catarrhal form of phthisis, than with the fibroid form. Increased blood pressure, as from severe coughing, or physical over-exertion favors its occurrence.

We can readily understand how a small area of perhaps only a few lobules may break down and lead to the formation of a small cavity without attracting much attention, and with but slight symptoms on the part of the lungs. The involved blood vessels being small, the bleeding is moderate and seldom dangerous.

The larger hæmorrhages are most apt to occur in a more advanced stage of the disease, from cavities of larger size, in which the involved vessels are correspondingly larger. While the walls of larger vessels are quite resistant to the tubercular process, they lose their support from the adjacent tissues, and are liable to become aneurismal, when diseased they rupture more readily, and may do so at a time when they are still pervious.

The arrest of hæmorrhage is by the formation of a clot, this is apt to be only temporary, as coughing often dislonges it, with a repetition of the hæmorrhage.

As to their import and prognostic significance of pulmonary hæmorrhages, some authors maintain that they do not usually exert an unfavorable influence upon the future course of the disease. While this may be true in some instances, it appears to me that a hæmorrhage from the lungs is always a somewhat serious symptom, and the dangers to the patient are:

1st. From the loss of blood and the nervous shock.

2d. From suffocation, if a large blood vessel discharges the blood more rapidly than it can be expectorated.

3d. From mixed infection, of other lung tissue through aspiration of the blood with the contents of cavities.

As to the loss of blood, this may be a matter of serious increase of anæmia of patients who are already more or less exhausted from the tubercular disease. We often see that it takes weeks and months before the patient's blanched condition, and pale mucous membranes return to the color existing prior to the hæmorrhage. It can not be maintained that the loss of blood in a wasting disease like phthisis is an indifferent matter, even if the quantity is moderate.

In addition to the loss of blood, we have, however, a mental or moral impression resulting from fright of the patient, especially with his first hæmorrhage. This in some instances amounts to nervous shock, and causes a sense of exhaustion for days and weeks after the hæmorrhage, entirely out of proportion to the loss of blood.

The danger of suffocation is happily a remote one, and in but few cases is the hæmorrhage so profuse as to cause death immediately in this manner.

The real and most serious danger, however, is in the occurrence of pneumonia, of the exudative form, or as Buhl describes it so well under the name of desquamative pneumonia. This form of inflammation is undoubtedly due to other pathogenic microorganisms than the tubercle bacillus, and occurs within a day or two after the hæmorrhage with the usual pneumonic symptoms. involving, it may be, a number of lobules, or even an entire lobe, and may occur in both lungs.

Since we see this complication only after severe hæmorrhages, and where we have evidence of suppurating cavity or rapidly extending destructive processes, the discharges from which show quite frequently diplococci, streptococci, and stephilococci, it is reasonable to presume that the infectious secretions were aspiated with the blood into the lungs portions, which become involved in the pneumonic process. The gravity of this complication must remain undisputed, inasmuch as death results in nearly half the cases within a month as the result of the pneumonia, and but few of the cases where the pneumonic process was at all extensive ever recover their previous condition.

From these considerations. I believe I am justified in maintaining that the occurrence of pulmonary hæmorrhage is, on the whole, a symptom of grave importance. The exceptions which might justify a less serious view, are explained by the fact that in many instances, hæmorrhages occur in the ordinary and often quite favorable course of phthisis. These are strictly preventable, and are caused by the injudicious conduct of

†Read before the Buncombe County Medical Society, June, 1897.

the patient himself, being usually due to physical over-exertion.

It is hardly necessary to say anything as to the diagnosis, which if the physician can witness the hæmorrhage himself, becomes self-evident. It is only when we have to depend upon the patient's statements or those of his friends, that any real doubt can occur, and the question of hæmatemesis, and laryngeal hæmorrhage may become a matter for consideration. The previous history will usually give sufficient evidence, apart from the fact that in hæmatemesis the blood is vomited, is usually mixed with food, is not frothy, but of dark color, and the reaction is acid, the stools thereafter contain blood, giving them the well known tarry character.

Hæmorrhage from the larynx is extremely rare, and when it occurs the quantity of blood is very small, is hawked up rather than coughed up. The inspection of the larynx will usually show the source of bleeding coming from that region.

In some cases doubt may remain, but in most instances the subsequent expectoration of bloody sputa will settle the question in favor of the lungs.

Dr. von Ruck's statistics show that hæmorrhage has occurred in 3 per cent. of all cases under treatment in the Winyah Sanitarium.

Previous to admission, hæmorrhage had, however, occurred in 21 per cent. of the same cases, and a similar difference appears in the statistics of other institutions with those from private practice, the latter varying from 16 to 30 per cent.

Seventy per cent. of the hæmorrhages under Dr. von Ruck's observation occurred in cases without active disease or destructive processes, and in most instances could be referred to over-exertion of the patient.

In thirty per cent. of them the future course of the disease was directly and adversely influenced.

The remaining thirty per cent. of hæmorrhages occurred during caseous pneumonia, or active, destructive disease, and sixty per cent. of these pursued an adverse course thereafter.

The treatment of pulmonary hæmorrhage should be preventive by avoidance of all physical and mental over-exertion, excessive stimulation, and anything else which materially and quickly raises the blood pressure. The benefit of such a course is clearly manifest by the much lets frequent occurrence of hæmorrhage in closed institutions where the control of the patient's mode of life is more absolute than it can be in private practice.

In the treatment of the attack absolute rest with the patient raised in bed so that he can cough and expectorate is usually all that is necessary. In the slighter hæmorrhages, if we assure the alarmed patient that he is not in danger, encourage him to cough up what blood is discharged, keep him perfectly quiet in bed in a cool room, avoiding hot food and drink, until all symptoms of blood in the sputum have disappeared we shall have done all that is essential.

When the patient is greatly excited, and our assurances do not avail, it may be necessary to administer a moderate dose of Morphia which has the additional advantage of allaying cough and thus favor the formation of clot. In more severe forms the Morphia is indispensible, and in addition the patient may swallow small particles of ice, and an ice bag may be applied over the heart, if the circulation is greatly excited or over the location of tho bleeding cavity if this is known.

The use of ergot, acetate of lead and gallic acid find many advocates and the facts remain that under almost any method of treatment the hæmorrhage stops usually within from five to thirty minutes, and before any of these remedies could have time to act. It frequently recurs even under their continuous administration.

Some prefer turpentine, oil of erigeron, or hæmamelis with perhaps more real advantage, but whatever the individual preferences may be, morphia, rest and the ice-bag are more important. The other remedies may be tried in persistent cases. Ligation of the extremities in cases where the hæmorrhage is severe and continuous should be tried and good results have been reported.

DISCUSSION.

In opening the discussion, Dr. Ambler said: The causes as to pathology in early hæmorrhage is obscure; but later in the disease it is due to rupture of a blood vessel, There is always more or less anurysmal dilatation in the cavities when the vessels are exposed. Over extension and traumatism will cause a rupture. Don't think the diagnosis of pulmonary hæmorrhage always easy, because hæmorrhage from the nasopharynx may cause a mistake when a constant trickling of blood is kept up, and as a consequence a constant bloody expectoration. Don't believe in percussion or any thorough examination of chest, as the treatment is about the same in such hæmorrhage. Danger isn't so much from loss of blood as from complications following. Blood in a healthy lung is rapidly absorbed. A feeling of pressure in the chest is sometimes relieved by a small hæmorrhage. Advise patient to allow blood to escape. Put ice in the mouth.

Salt sometimes seems to have a beneficial effect. Also an astringent on spray in bronchial hæmorrhage, tr. chloride of iron is one of the best. I doubt ergot's good, though its use is common. Quiet and rest for about three days in mild hæmorrhage. Don't believe in pushing diet when patient is near normal weight.

Dr. von Ruck said: I doubt the frequency of anurysms as Dr. Ambler believed. Bleeding from naso-pharynx is always small and can't be mistaken as it. I don't believe in examination at all, unless to find bleeding point with an idea of placing an ice bag. Don't believe hæmorrhage often occurs from old cavities.

Developmental Neuroses and Degenerative Influences Affecting Mind and Body in Childhood.

By JOHN MADISON TAYLOR, A. B., M. D., of Philadelphia, Professor of Diseases of Children, Philadelphia Polyclinic; Neurologist to the Howard Hospital, &c.

It is of the utmost importance to urge upon the general practitioner the grave importance of making such study of the subject of developmental neuroses as shall enable him to promptly recognize and treat evidences of mental perturbation coming under his observation. Moreover, it is distinctly of value to enter at some length into the various causes which produce mental impairment in children, because they are much the same as underlie and condition other degenerative changes in the brain and nervous system.

Insanity is rare in childhood arising from the same source whence it comes in the adult, but mental defects are only too common and grow worse with startling rapidity unless wisely handled in the very beginning. Minor mental deflections, or shortcomings, which may escape detection, form a fertile ground for ineradicably evil mental attitudes to take root. Acute disease frequently disturbs the cerebrum, and the neurodendrites may not recover with the subsidence of active processes, even though the structural damage be originally small. When this occurs it is necessary to carefully direct even the simplest educational and disciplinary measures in order to inhibit further lapses and regain healthy tone.

Successful treatment of mental disturbances depends upon the prompt recognition and judgment of the family physician. He may thus avert unspeakable evil from those in his keeping, and he must aid the specialist to the utmost, both by keen observation and by promptly bringing suspicious tendencies to the notice of alienists. He it is who has the opportunity to note the potentialities of families, their trophic energies, their resisting powers, susceptibility to toxic influences, the stability of their nerve cells. His is the privilege of setting aright, when possible, evil traits, and remedying faulty educational plans and detecting those sensorial defects on which depend developmental possibilities in many directions.

The causes of mental impairment are twofold, remote and immediate, or essential and accidental.

The fundamental or essential causes of mind disturbance are those degenerative influences which have to do with producing instability of the nervous centers and cells, (unavoidable because finished.) The determining or exciting causes are of great variety, avoidable, possibly, and rarely, almost never, capable alone of producing degeneration. While of vast importance to study the real causes, little can be done to influence them except by movements of widest co-operative scope. Nature sets bounds to many of these damaged families by limiting their reproductive powers. Under suitable environment and opportunities a regeneration is at least possible.

During the period of brain growth in bulk up to the seventh year, when the full size and weight are almost attained, nutritive influences are of the largest value. How far this can reach positively needs future demonstration but is rich in promise.

There are during these early years, more of formative power and less of energy exhibited. The brain of a babe, or infant, consumes more oxygen and produces more carbonic acid and urea. The chemic constitution of the muscles is different, and no doubt, of the neurine of the nervous centers. The nervous tissues are more subject to proliferative diseases, and less to those of disordered function and degeneration.

One, if not the most, important quality of the brain during this formative epoch is deficiency in resisting power. In this respect it shares with many other organs, but none of them is comparable in importance to the brain. This power to resist hurtful influences from without, or within, is the very keynote of childish physiology, the index of vital force. The wide variations between functionating power in structures which are (to all our present means of investigation) of practically similar structure are the special realms for promising investigation in the future. Whatever interferes

with these delicate buddings or energizings and gatherings of potentiality thereon leaves its blighting mark for all time.

The unique fact about the nerve cell is the extreme slowness with which it develops function after its full bulk has been attained. Small differences in amount or condition of the blood, its acidity or alkalinity, its cleanliness or toxicity, and the pressure maintained in the cerebral vessels from whatever cause, especially if continued just a little too long, may cause irreparable hurt, or such damage as requires much time and perfect conditions for repair.

The one factor common to almost all cases of mental degeneracy is parental alcoholism; many observers concede forty per cent., and how much more can only be conjectured. Next come other ancestral defects of brain; many of these might be referable to alcoholism as a not directly traceable, but an essential factor.

Alcohol, when misused habitually, injures all organs and tissues, notably the blood, resulting in pathological states, or increased susceptibility to disease, or at least intensifies the latent feebleness. In short, it breaks down the barriers which a vigorous vitality sets up against the unceasing onslaughts of disease or death. It incidentally perverts the more delicate aggregations of cells, as in the brain and central nervous system, not only imperiling their integrity, but reducing to a lower level the vital forces needed to reproduce offspring of full powers and resistances.

As Darwin points out, all the evils from alcoholism can pass from father to son, becoming worse if the poison is continued until the result is self-limited, in many instances by sterility.

The more pronounced effects of heredity are not to be remedied. The children of hereditary alcoholics show a tendency to excess in the same way, and this may be an index of impaired physical and moral resistance in the whole family.

Certain accidental causes produce demonstrable changes in tissue, as inflammations hyperemias of excitation, traumatism, adventitious by products, toxic agents, senile degenerations, epilepsy and syphilis.

Overexcitation of the brain is acknowledged as an inducer of insanity, independent of other morbid factors. If the nutrition of the cells is unduly interfered with for a long continued period of time, a series of changes ensues, not only in the cells themselves, but also in the vasomotor and vaso-dilator control systems which may be temporary or permanent.

The circulatory apparatus is overtaxed to meet the increased demand; but the cells being stimulated beyond the health limit, a condition of unstable equilibrium between nutrition and function is reached, and consequently, instead of normal discharges of energy, irregularity of discharge is produced by the prolonged maintainance of over-vascularity.

Malnutrition is both a powerful exciting cause, and itself competent to irretrievably damage the brain. In this country we are less influenced by the deprivation of food, being better provided in this particular than any other large nation, but our people are more subject to disorders of overtension from protracted strains on the nerve resistance. We are less given to alcoholism, because our food supply is ample, and the craving for stimulants by underfed stomachs less general; but owing to the intensity of effort, our habits of fierce competition, there is induced a feverish restlessness and higher cell activities. The brain being the stimulator and inhibitor of all nutrition, as Clouston points out, hence becomes responsible for the functions of all the organs, and as they fail, it suffers harm.

Melancholia often occurs in certain anemias, and is a transient state in many toxemias, notably that due to the uneliminated by-products of katabolism. The action and reaction of the peripheral organs upon the brain are shown in numberless ways, notably in the therapeutic value of careful nutritive regulation in the insane, which is often alone curative. It is again shown in the extreme susceptibility of the insane to phthisis which is greatly lessened by judicious feeding and attention to digestive and other organs. The asylums now afford far better comforts than are enjoyed by the average person, and thus the tendency to tubercle is kept down; but, even in these comfortable homes, where food, leisure, wholesome occupation, air and sunshine are lavishly provided, tubercle shows itself readily, and is hard to check. Great improvement is frequently made by the systematic measures known as the rest treatment, in asylums as well as in private practice, influencing powerfully for good those, who with many opportunities, have yet failed to secure the forcing of their nutritive processes, known to be essential.

Heredity must be distinguished from immediate inheritance, and should be considered in the light, certainly, of several ages and many years, probably a century or more. It has to do with the transmission of certain tendencies and peculiarities, which are the "hall marks" and special complexion, not only of families, localities, and communities, but of races and nations.

We can at once recognize the potentiali-

ties of families, the result of inbreedings of people of like kind or analogous traits, but to estimate those fairly it is imperative to consider the environment, the religious, national and political lights, or other influences under which these matured. More important than these even (which have largely to do with intellectual processes and the formation of characteristics) is the question of physical habits and customs, opportunities and tastes which much more influence the physique, and through this the brain structure. The quality and condition of the mind are profoundly dependent upon the integrity of the material of which the brain and nerve centers are made, and by which they are maintained. Whatever else may be the distinguishing feature of the mind, nothing can be predicted for good of a faulty structure of the organ of the mind. Moreover admitting the posibility of a competent brain in a body equipped with an unstable or defective nervous organization, this condition cannot be maintained, and must react disastrously upon the mind-organ soon or late.

Inheritance may then represent the conditions which directly or recognizably influence the child in its mental and physical features. It may include certain tendencies, too, which are probably independent on heredity, as, for instance, taste, tricks of speech, and manner, appearances, features and size. These varying inherited qualities may be few or many in one or another of the same family.

Alcohol, when used freely, produces recognizable results rather more obviously upon the nervous organization of offspring than upon shape or build. From its use come various degenerations, chiefly upon unstable nerve cells, which are exhibited in perversion of mental, but even more of moral tone, until at times marked criminality alternates with insanity or fatuity, and these with instabilities, as in epilepsy, etc.

Consanguinity of parents does, certainly, seem to influence offspring disastrously. Even where a careful search fails to reveal any other factor capable of large influence.

B. W. Richardson says: "If the intermarriage of disease were considered in the same light as the intermarriage of poverty, hereditary transmission of disease would be at an end in three or four generations."

Faulty habits of thought and action, early established by accidental conditions mold character and influence mental growth. Whether the effect will fall upon the individual only, or be transmissible may fail to appear, but the presumption is that it does pass on.

The paranoiac and the high-grade imbicile oftentimes enjoy a wide liberty of action, (rarely suspected by their families of being aught but folk of "peculiarities") and their offspring are worse than they. The victim of an epilepsy which may be under fair control, not seldom weds a nervous, hysterical person, and from them comes degenerate offspring. The deaf mute, grafted into doubtful stock, has produced idiocy and imbicility in second and third generations. Syphilis is conceded to be the predisposing cause in 17 per cent. of the cases of idiocy. The intermarriage of relatives is always a peril, seeing that almost no stock is without taint or enfeeblement, which is thus multiplied. Lowered health in one or both parents, maternal impressions and acute disease during pregnancy, senility of the father, one or all throw a great strain upon organizations of hereditary bias of different kinds and degrees.

Febrile and post-febrile states are responsible for many maniacs, classified by Nasse into those of the fever itself, of protracted continuance of fever, and of convalescence. Spitzka declares that during convalescence the more benign forms occur, and are common in adults; the first two are of more frequent occurrence in children. Those febrile processes bearing the burden of the largest responsibility in causing insanities are typhoid fever, scarlatina, measles, rheumatism, and diphtheria. The so-called reflex insanities are in truth probably only instances of exciting causes disturbing or destroying the minds of children of unstable mental equilibrium. Spitzka also calls attention to a progressive form of hysterical insanity in girls about the time of puberty, which begins as dyspeptic states, shades off into aversion to food with delusions about eating, and from this into other disorders of over-consciousness. Thus often are the hysterical insanities seen to begin in actual disease processes, often slight, and by gradual increments, colored by environmental influences, pass into serious mental disorders.

A very important instrumental cause of degenerative trouble is neurasthenia, the lowering of central energies by various forms of exhaustion, exhibiting widely varying states of neurosis, till the normal resistances are fatally impaired and manifested in the individual, and even more so in the offspring.

Depressing influences are especially hurtful to children, as deprivation of proper home comforts with harsh treatment, irrational punishment, brutal scoldings or cruelties can crush out budding intelligence, and do worse in causing the child to stem the current of abuses by cunning, subtleties,

lies and thefts. Thus are varieties of acquired imbecility brought about, but this is more usually moral in tone, and thence is the transition affected to moral imbecility and criminality. The impressionable clay is fashioned to a vessel of evil, or if not so bad then wholesome tendencies fail to mature, and we have children of stunted minds and character who are reparable in very moderate degree.

The nutritive defects alone produce incalculable harm, even admitting that no physical bias co-exists. Mind is absolutely conditional upon brain competence. Nutritional diseases, as rickets, tuberculosis, etc., are familiar backgrounds for all nervous diseases. Organic defects, as of kidney, heart, lungs, etc., are not shown to be of such grave import as in the adult, but when present are occasionally responsible for manias. Excess of heat either from fevers or sun, or low temperatures, long continued, exert a most recognizable effect.

City life may be accused of an immense deal of damage to germinating minds. The perpetual round of stimulants and excitements to the child, which, as Peterson says, "is a bundle of nerves and centers, and reflexes in a state of great activity, prepared to receive, store up, and reenergize a world full of new impressions suddenly thrust upon it."

Other degenerative influences are the infectious diseases, depressing circumstances, want, exposure, deprivation of suitable hygiene, toxic infections, the use of opium, tobacco, etc.; the excitement of city life fiddling upon these over-sensitive nerves and reflexes with insufficient opportunities for repose and quiet; hurry of all kinds, hard, continuous labor, united want and bad homes, vicious companions, and especially parents who terrify and oppress.

Traumatism is an exciting cause of great rarity. Injuries to the unborn child by attempting abortion are, as Ireland remarks, "a probable cause of unknown extent." Those received during protracted labor are appreciated but not understood. Sometimes the effects of the trauma soon pass away, at other times they cause permanent crippling, or worse, motor explosions, epilepsies, recurrent insanities, etc.

Ammonol in Sleeplessness.

By L. A. Rutherford, A. M., M. D., Kinston, North Carolina.

Sleeplessness is a symptom of cerebral innervation, being constantly present in all devitalized states of brain; although irrespective of this, sleep may be prevented by exciting passions, mental anxiety, diseases, drugs and poisons. It is extremely proper to inculcate rest, moderate daily exercise in the open air, nutritious, phosphatic diet, rectify acidity, an avoidance of all stimulant excesses, apartments well ventilated, rigid hygiene, removal of all physical causes for wakefulness, secretions and excretions regulated.

In my treatment of sleeplessness I avoid hyoscyamus, hops, Indian hemp, morphia, chloral hydrate, hyperdermic injections and bromine, and rely exclusively upon ammonol, the great antidote to innervation of brain.

Ammonol creates no law of habit; does not arrest any secretion; does not exhaust any spinal tissue or organ, and yet it produces the most refreshing, invigorating sleep, simply because it promotes molecular growth of the brain.

Ammonol is stimulating, anti-spasmodic. It is the best coal tar product, a sure cure for sleeplessness; a destroyer of the plasmodium of malaria. Try it, doctors, in swamp fevers. Dose 10 to 20 grains dry on the tongue.

A Clinical Lecture on Gastric Dilatation.*

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William Decker, age 23, moulder. This patient complains of pain in the side and back, of a sharp cutting kind the maximum intensity being just at the edge of the floating ribs and a point at or about the lower part of the scapula posteriorly on the right side. At the same time he suffers from quite a number of seminal emissions, his urine is very heavy, of a red color and deposits a brownish or reddish-brown pre-

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cipitate. He has great difficulty in getting to sleep. He cannot get to sleep because he does not feel he he is in a natural condition, he is nervous, upset, and restless, and as a result, sleep seems to have forsaken his eye-lids entirely. He says that in addition he has severe muscular twitchings and before going to sleep he will start and jump all over.

You will notice that he complains of no regularity or persistence of any one symptom or set of symptoms with one exception, the pain; he says the pain is there nearly all the time.

This man volunteers a hundred questions and makes a half dozen diagnoses in the progress of the examination. He tells us that he has eye trouble; he also tells us that he suffers from anæmia.

When he has had "trouble at night," which means when he has had a seminal emission, he wakes up next morning feeling heavy, and the thing that restores him he says is the application of cold water to the head, face and neck followed by good rubbing, after which he begins to pick up and feel better again.

He has a good appetite, can eat at any time, and yet he has progressively lost flesh. He has been working for a number of years until lately. Five or six months ago he had to give up his work. He complained then of a general nervous condition.

Remember always to allow your patients to give you first a general description of their case, so that you may have as it were a birds-eye view of the complaint.

Now you will notice from the outset from what this man tells us that there is a general tendency towards introspection. He has told his symptoms.

Now we will try and get a more systematic, detailed history of this case. This man suffers from neurasthenia but as we know that neurasthenia and organic disease go side by side, we should be very careful in this case to exclude every possible chance of organic trouble.

Proceeding in a regular, logical attempt at investigating the case, we will first find out what his *family history* is.

He gives the history of his father having been an inebriate, and who died from the direct effects of liquor. I saw his mother the other day and she is a typical neurotic degenerate, anæmic, and if I may judge offhand, certainly in the pre-tubercular state. His brothers and sisters he says are healthy, but health with this class of people as a rule means that they are not down sick in bed and do not linger there. It does not indicate any high state of nutrition.

He states that he has had the usual exanthemata, measles, scarlet fever and the like. He further informs us that at an early date, within the first year of his life, that he had what was diagnosed "gastric fever." Gastric fever usually means gastritis, or at least that is the way I take it, and since that time his mother tells me, he has always had as a consequence a very weak, irregular and erratic digestion. He has had rheumatic pains for a number of years in the arms and shoulders, though not suffering from any actual acute rheumatism.

If we examine into his actual physical condition we are struck with several peculiarities. In the first place the man is distinctly under size; his nutrition is poor; he is anæmic, pale and pinched looking.

If we look at his head we will notice that he has a square shaped head, a head in which the antero-posterior diameter is almost equal to the lateral diameter, a head that is known as the brachio-cephalic. You notice that the forehead is retreating and that the right eye-brow is slightly larger and slightly higher than the left and that the general trend of his face is toward prognathism. As I have told you before we call these marks stigmata of degeneration and this man before us would be classed as a degenerate.

When we examine his chest we find that it is as a whole lop-sided, and he remarks that the left shoulder has always been higher than the right. Posteriorly we notice that there is a tendency towards deviation from the perpendicular line in the spine, in other words we have a condition of slight lateral spinal curvature.

Now then we will get him to place his hand over the most painful point in front. It is a spot about one half inch larger than a dollar, and is located directly opposite the curve of the lower ribs and anterior to the two floating ribs, and lies a little anteriorly to the curve of the ascending colon into the transverse colon. Now I call your attention particularly to this fact. The other tender spot is located on the right side about two inches below the end of the scapula and about one inch to the right of the spinal column. These two locations of pain are very frequently associated with gastric trouble.

Upon examination of the lungs we find that the respiratory murmur is good and clear, and that he has, everything considered, very good expansive power.

On examining the heart we find a blowing murmur located over the base, not transmitted to the left, but heard with equal intensity at the upper edge of the sternum; that is to say a murmur soft in character transmitted upward, an anæmic murmur.

It is not as marked as I have seen in many cases, yet sufficiently marked to make it diagnostic.

Letting the man recline upon the table, I place my hand upon the abdomen and the first thing that I notice is a marked pulsation of the aorta. Now marked pulsation of the aorta is nearly always associated with relaxed vaso-motor tone and is found very frequently in anæmic and neurasthenic conditions.

Gently palpating the abdomen we find muscles very much relaxed and pliable, with no evidence of any abnormal condition there except that the patient flinches when the fingers are pressed over the tender spot anteriorly.

Palpating the edge of the liver we find that it is soft, pliable, normal. There is no evidence of any floating kidney that sometimes produces pain in these regions. But during all the manipulation we are aware of the fact that there is a quantity of fluid in the abdomen in a space about two inches in diameter with the navel as a center.

On percussion we find the colon tympanitic, and that there is no dullness under the painful spot. Commencing low down and percussing upward toward the navel we note that the sound that is characteristic of the stomach commences about one half inch below the umbilicus.

On auscultation we notice that by gently rocking the abdomen that there is a marked gurgling sound in the area covered by the stomach.

He says that he suffers a great deal with nausea; that he vomits at infrequent intervals; and that the vomit usually consists of something that he has eaten twelve to twenty-four hours previously.

Examining the reflexes we find that they are very, very active and that there is no evidence of ataxia. As I tell you so frequently that where we have to deal with painful gastric troubles that come in paroxysms, we should always bear in mind the probability that we have to deal with a gastric crisis as the first symptom in a case of loco-motor ataxia, and the constantly increasing prevalence of this disease makes us, or should make us, very careful to always exclude it especially when any one of the symptoms that go to make up the symptom-complex of the disease is present.

Now what is the probable condition here? The probable condition that we have to deal with is dilatation of the stomach. Dilatation of the stomach is a condition in which the stomach is not only enlarged but is weakened physically, that is to say its motor power is diminished and it is unable to empty itself within the proper cycle of the digestive process.

How can we explain the painful condition that arises in this case if we accept the diagnosis of gastric dilatation? The probabilities are that if we were to remove the gastric contents we would either find that the man had an increased secretion of hydrochloric acid, or what is more probable abnormal products of fermentation such as lactic, butyric and the other organic acids. Now these organic acids as they are formed, or as the hydrochloric acid is secreted in larger quantities than usual, passes through or impinges upon the pyolrus, causes spasm or contraction there, and in a little while gastric irritation is set up and these intense pains produced.

Could this condition be one of gastralgia? That is hardly probable. Gastralgia as a rule occurs upon an empty stomach, is relieved by the ingestion of a meal. Gastralgia rarely causes nausea and vomiting except from pain, and most patients explain it in that way. Gastralgic pains like hyperpeptic pains are relieved by eating. But as we find in this case the ingestion of food bears practically no relation to the pains, but the pains occur at varying, irregular intervals and this is more or less characteristic of dilatation of the stomach.

Could we have to do with ulcer of the stomach? The man gives none of the classical symptoms that accompany this disease. He has not vomited blood, does not give the history of the terrible pain on the ingestion of food. He has had no vomiting of bloody tinged mucus, no evidences whatever of an erosion or corroding process in the gastric wall.

Could it be carcinoma? The age of the patient, the absence of cachexia, the absence of any evidence of growth at the pylorus are opposed to carcinoma. If carcinoma had reached such a point as to cause all the suffering that this condition has caused, we would very likely find that the patient had vomited not the clear blood of ulcer of the stomach, but the coffee,ground characteristic to a certain extent of carcinoma.

The way to make an absolute diagnosis of this trouble would be the introduction of the stomach tube. If we were to introduce the stomach tube, say tomorrow morning, and find in the stomach food that he had eaten the night before we would be justified in believing that we had to do with dilatation of the stomach because we know that the stomach certainly, even in slow moving stomachs, should empty itself within a period of six or eight hours, and the presence of food in the stomach after twelve

hours is sufficient evidence of itself of dilatation of the stomach.

We should then give him a test meal consisting of bread, water and a little salt. Introduce the stomach tube at the end of an hour and remove all of the contents that we can. If we found that the fluid test meal measured more than forty cubic centimeters, we would at once conclude that we had to deal with a dilatation of the stomach.

The question would then arise as to what character of dilatation it was. Whether it was a dilatation accompanied by a hyperpeptic state with increased secretion of hydrochloric acid, or with increased chlorine liberation would be for the chemical test to decide. Or whether we had dilatation accompanied with diminished hydrochloric acid with the presence of imperfectly formed constituents, acid fermentations, characterizing the second form I spoke of before, either one of which forms would explain the location of the pain which is practically at the pylorus with the well known reflex pain posteriorly.

Is there any other fact that would lead us to believe that we had dilatation of the stomach? A large percentage of dilatation is found in those who habitually live improperly. We find it in the German who eats large quantities of cheese, drinks large quantities of beer, sits up late at night enjoying the convivial table. We know that the artisan who hastily gulps down a large meal in the morning with cup after cup of coffee, who eats a cold meal in the middle of the day without regard to mastication, and comes home at the end of the day to repeat the process for the third time, is the man likely to develop the condition of dilatation of the stomach.

What is the prognosis in dilatation of of the stomach? I should say that the prognosis in regard to life is very, very favorable, but with regard to cure depending largely on the patient's will power. If you find a patient that has sufficient sense and sufficient will power to follow out the proper course of treatment, in all probability we can relieve him and the relief given him will be permanent only in so far as he takes care of himself.

With regard to the various classes in society, I should say that the better classes are more apt to obtain permanent relief than the poorer classes whose habits of life are such as to preclude them from taking proper care of the stomach after a certain time. They will take care of the stomach only so long as they are aware that there is some trouble with it, and after that they will neglect themselves in a careless, senseless way.

What is the duration of dilatation of the stomach? From what I have previously told you you will infer that the duration depends largely upon the patient, In very mild cases we can relieve the patient, and if he takes the slightest care of himself the relief will be permanent. Where the trouble has gone on from year to year we can hardly expect to give the patient permanent relief, but we can give him so much relief that he himself will consider it a permanent cure, but we as physicians would not recognize it as such. It is a symptomatic cure.

How can we certainly diagnose dilatation of the stomach? The only certain way that I know of is by means of the stomach tube. We must gain an idea of the capacity of the stomach to empty itself. To do this we will introduce the stomach tube before breakfast. Now if you find in the stomach residue particles of food and a quantity of fluid exceeding ten or fifteen cubic centimeters, you would be led to infer that you had to do with a case of dilatation. To make this certain, however, we give the test meal that I spoke of last time, and one hour after the eating of this we introduce the stomach tube again and draw off the contents.

This is a nice little procedure, and I have seen it fail in the hands of many a physician from simple lack of a proper knowledge of how to introduce the tube and how to manipulate it. You want to have a little gray matter at the end of your fingers.

The way to introduce the stomach tube is not to tell your patient to throw back his head or to open his mouth, just simply tell him to do as you say. You then tell him to open his mouth just a little, just enough to place the tube between his teeth. Now introduce the tube and when you strike the upper part of the pharynx he is going to throw his head back; don't let him do that, make him bring his head down toward the chest; then as it strikes the upper constrictor of the pharynx tell him to swallow, and he will do it. At this juncture tell him to take a long breath and then gently push the tube down until you find a second constriction and then have him swallow again and you can bring the tube down almost to the stomach; insist upon his taking another long breath after which you can pass the tube through the cardiac end of the stomach, and remove the contents of the viscus.

You will find a good deal in the text books about telling the patient to compress the belly muscles; but if you will simply tell the patient to bear down like he is going to have a stool you will find that the contraction of the muscles will force the liquid up into the tube, and once it is star-

ted you can remove the entire contents of the stomach. I believe my own fingers are so delicate that I can tell when the tube strikes the bottom of the stomach. I introduce it until it strikes the lower edge of the stomach, then I can empty the stomach and proceed with the chemical tests necessary for diagnosis.

Now we have given one and one-half ounces of dry food and two hundred cubic centimeters of water. If we find that there is more than forty cubic centimeters retained, or if the residue measures more than twelve grammes, we have to do with a dilatation of the stomach.

Now with this chemical meal, with this partially digested meal, we go to work and make our analysis. I am one of those that believe in a thorough, careful chemical analysis of the gastric contents. It gets at hundreds of little facts that we can never obtain otherwise. For example, it tells us at once whether we have to do with the presence of organic acids, whether we have to do with an excess of hydrochloric acid, or whether we have an excess of hydrochloric acid with the formation of the organic acids. This analysis forms the rational basis of our therapeutics and the basis for the nature of the diet of the patient.

To analyze a meal properly requires a thoroughly equipped laboratory. On this qualitive and quantitative analysis as a basis we build up a dietary and proceed with our therapeutics.

Treatment, We divide the treatment of dilatation of the stomach into two classes (a) mild dilatation, (b) severe dilatation. Cases of mild dilatation we find associated more frequently with nervous troubles than in any other condition of the stomach, and I venture to say that three fourths of all the cases of nervous trouble that present themselves to the specialist for treatment have slightly dilated stomachs. Now as a result of this slightly dilated stomach we find a number of peculiar symptoms especially referred to the nervous system. In these cases we usually prescribe some means of hastening the evacuation of the stomach, in the belief that the intestine will perform for a time at least the function of both stomach and intestine, and later on that the partly dilated stomach will contract and be able to take up its function again and give the patient relief. To this end I use large doses of nux vomica.

If you use nux vomica in small doses you will fail ingloriously in what you are trying to accomplish. I started this young man here out on twenty drops of the tincture after meals. As you heard me say to day we increased the dose to thirty and if necessary I will increase the dose until he gets to fifty drops, then I will discontinue the tincture and use the extract of nux vomica in from one third to three fourth grain dose, starting with one quarter of a grain and increasing.

In severe cases of dilatation of the stomach it becomes necessary to put the patient upon a dry and aseptic diet—dry at least. I have kept a patient upon a dry diet, many have nothing but dry toasted crusts, as many as he can eat in a day with a little red wine, and continued this diet for a week.

Depending upon the severity of the case we use lavage. If necessary I use it daily or twice daily, the latter is very rare indeed. I have only seen one or two cases in which I have used it twice daily.

The effects of lavage are positive. It removes the fermenting or hyper-acid contents and cleanses the stomach; the impact of the water upon the walls causes contraction. When we first start with the stomach tube we frequently observe that the contents are evacuated by the siphon alone and that the flow of water will gradually diminish as the volume becomes less; as the condition improves we will observe that toward the last part of the wash a little spurt will be given which shows that the stomach is contracting, in other words lavage increases the muscular activity of the gastric walls. Nearly every one of these cases is constipated and we find that the use of lavage removes this hyper-acid mass and favors the introduction into the bowel of large quantities of water, this in turn producing an increased moisture of the intestines and as a result better stools.

Sometimes we pass into the intestine the hyper-acid mass and find that a diarrhœa is produced, frequently of great benefit to the patient. As the patient commences to improve we can finish the lavage either with antiseptic solutions such as boric acid, salicylic acid, salicylate of sodium or a one-fourth of one per cent. solution of nitrate of silver, or we can finish it with cold water. The cold water will produce a spasmodic contraction of the stomach that is beneficial to the development of its muscular fibre.

In bad cases we can use the electrical treatment internally for the development of the muscular fibre of the stomach. My experience, however, has been adverse to this method of treatment, and I rarely use it now, preferring to depend upon the external modes of treatment to relieve the case.

I do not believe lavage of itself will cure a case of dilated stomach, but it will certainly make the patient better and improve his general condition.

I depend not only on water internally,

but water externally affords the true way of curing these cases. There is no question but what if you will take a patient of weak muscular fiber anywhere, I do not care whether in the intestine or in the stomach, or the muscular system generally, if we apply stimulating applications to the cutaneous surface we improve the whole muscular system from one end to the other. In these cases we would place the man in a hot air apparatus until he perspired slightly; I then apply the warm jet over the body for one or two minutes; followed by its application to the abdomen with a view of causing not only the external abdominal muscles to contract, but reflexly stimulating the muscles of the intestine and stomach. Under the warm water they contract but little, but drop the temperature twenty degrees and apply the water to the surface of the abdomen and we find that there is a forcible contraction of the abdominal muscles with increased respiration, which of itself is an excellent stimulant to the contraction of the gastric walls,

What is the result of this treatment? Toxine elimination is favored, and the patient at once notices a change in his well being while at the same time we are constantly stimulating the muscular fibre of the stomach and intestine to further development.

A like result can be obtained by the use of static electricity. We find that a heavy spark applied first to the spinal column and then to points over the edge of the liver and about the pylorus together with heavy sparks in the left iltic region will be productive of results similar to those I have just mentioned but not quite as forcible.

You would find if you were to use the water treatment, that after a short time its benefits would begin to get less, the human system becoming habituated to every known treatment and that treatment losing more or less of its effect. Then it is well to use static electricity returning again to the water treatment.

The galvanic current externally is sometimes of advantage, but it must be given in enormous doses. I use the galvanic current when I find that the secretory apparatus is much disturbed, and particularly where there is a diminished secretion of juice. It should be given in large doses, fifty to one hundred milliamperes, passed through from front to rear. When we do this we get beneficial results but otherwise we do not.

In summing up the treatment of this trouble you will observe that I first insist upon knowing the absolute condition of the stomach before I proceed to treatment; that knowing the condition of the stomach and its capacity, I build a rational, scientific dietary upon that basis. I then remove by lavage the gastric contents that are over acid or fermenting; and then procedures by means of which the muscular fibre of the stomach is stimulated and developed so that it can pass the gastric contents into the intestine within the normal cicle of the digestive process accomplishing all this by a combination of lavage, diet, external hydrotherapy and electricity.

The subject of dilatation of the stomach of course does not come technically under my department, Nervous Diseases, but I bring this case before yon in order that you may realize the necesity of a thorough understanding of gastric diseases in the practice of Neurology. As I said before the majority of cases of functional trouble are *accompanied* by some gastric disturbance, either of a functional or organic character, and we must be very, very careful to realize that the origin and cause of the gastric disease, in many instances be due to unrecognizable nervous disease. I am one of those that hold to the belief that so-called functional indigestion or dyspepsia, is nothing more than a cerebral disease, and I think if one will study the causes leading up to these functional troubles, he will arrive at the same conclusion that I have, viz., that indigestion is a brain disease.

"Some Thought and Other Things."

Referring, by permission, to Dr. E. C. Register's Essay, "The Specific Action of Quinine in Malaria," p. 686, June Journal, a careful reading will show the author thinks "malarial fever, without complications, will subside after the plasmodium of malaria disappears from the blood," and "that we have in quinine the means to completely eradicate malarial poison from the body."

This assertion is in keeping with the generally expressed opinion of the profession.

Allow me to ask, do the medical profession, as individuals or as a body, never grow out of an idea?

How long has it been since the lancet was the one means resorted to, to eliminate? My arm bears the mark where the lancet, pressed by old Dr. Cunningham, of Augusta, Ga., bled me. I'm not a hundred yet. How long ago was "laudable pus" considered "*the* thing?" Ideas come and go, good ones stay. "Elimination," the *getting it out*," has been the idea for centuries. It is still the idea, because "*keeping it out*" is a more different matter.

Dr. Sikes, on p. 688, does not think that

quinine is the reliable "eradicator." He says, "I find that an entire reliance upon quinine does not meet the demands of the case;" and goes on to say, "there is evidence that if the germ is destroyed, it only takes 6 or 8 days for the trouble to return." Mark the "*if*."

Another says, "It (quinine) ought to be braced with (or by) arsenic." Another, "when it fails, warburg's tincture." *All* of the association do not have the implicit faith in quinine.

Again, Dr. Sikes seems to think quinine unreliable and rebels against using it as a test to differentiate malaria from typhoid.

Dr. Royster says such use is "unscientific and unjustifiable." Why? I will answer the "why." I say it is both "unscientific and unjustifiable," because quinine is a failure even as a test for malaria, much more so as a differentiate. It fails to produce its vaunted effect in nearly 40 per cent. of malarial troubles. It does not act always the same way. A test should be *certain to act always the same*. A chemical test is certain, it is scientific. But to apply an uncertain drug or chemical as a test to decide a difference, is as the doctor says, "unscientific." It is "unjustifiable," because the doctor has no right to torture his patient simply to satisfy *himself* that a thing is, or is not so, when a careful study of the case will give him the knowledge without. No wonder the doctor objects to such proceedure. He says, "I am sure I would not like for the doctor to give me quinine unless I was sure I had malarial fever." Yet this trick is played every day and 30 to 60 grains of quinine is thrust down a patients throat, hot with fever to satisfy *the doctor*. Is it not a certain thing that malarial paroxym *goes off with a sweat?* Is it not also as certain that typhoid fever does not go off entirely, nor with a sweat, but only subsides? Might not the stricture of the doctor have been carried a little further and added "*unprofessional?*"

Quinine fails as a test—quinine fails in nearly 40 per cent. to abort the chill, and seems always to fail when human life hangs in the ballance.

In other words, it is not a reliable test, as it will not act the same way every time. It disappoints; as in the case, 18 years ago, of my only son and child, when with heart and head racked with hope and fear, I saw the convulsion come on (congestion of the brain), that, *had quinine done its "safe and sure" work*, would have been prevented. What faith can a man put in a remedy when he sees the little body of his infant boy convulsed with spasm, to relax in a few seconds, in death? The "sheet anchor," the "eradication of malarial poison from the body"—failed to do what was claimed for it. It failed because it is a fraud and treacherous. And men high in the profession said *then as they now*, "we have in quinine the means to eradicate malaria from the body." And I believed it. But enough. Quinine by itself *will not cure chills* in North Louisiana, aided and braced by every means it failed in my hands in 40 per cent.

Again, quinine causes a fever,or rise of temperature, in healthy people; and adds several degrees to that which follows the chill if it fails to abort it. It has for many years been noted that the system very easily gets accustomed to the drug, so that each paroxysm takes more and more, to produce desired effects,

It is useless to say that these large and increased doses do not add to the disquiet, restlessness and delerium of the fever. It is said that quinine "in amount of 1 to 20000 will kill the parasite in the blood." By a rough calculation, 1 grain will clear 40 oz. of blood; thus $6\frac{1}{4}$ grains of quinine *ought* to destroy all the germs in the entire, average, body. I ask them what is the use of these 10, 20 to 60 grain doses packed into a man's body? If $6\frac{1}{4}$ grains will do it, why give 5 grains every 4 hours and 20 to 40 to abort the chill? The facts are *they don't do it*,

Dr. Sikes says. "It only takes 6 or 8 days for the disease to return again." I. E., the germs are not *all* killed, even by 20 grains, much less by 1 20,000=$6\frac{1}{4}$ grains.

Four authorities and a new book are cited to prove the assertion that quinine will destroy the plasmodium. Have any of these authorities ever *lived 5, 10 or 20 years* in a Louisiana (or other) swamp and studied the effects of quinine in the body? Have any one, or all of them, ever had malarial (?) haematuria (called Cinchon poisoning by Dr. Bransford Lewis)once or twice, following a few grains of quinine? If not, I do not think they are good authority. Of what good is the opinion of a man on yellow fever, if he has never seen a case of it? How did Koch acquaint himself with the cause of cholera. He and Dr. Sternberg, and others studied diseases *on the spot*.

If authorities want to know anything about plasmodium, outside of a test glass, they must go where it is, in its most perfect condition.

Twenty-five to forty years ago I thought as Dr. Register does. I took the "authorities'" word for it and gave and *took myself* quinine, with result of failure to abort chills and fever, and three to five cases of haematuria every year; twice in my own body, I gave quinine between

times, and in 5 and 8 grain doses every hour for three hours, to abort the chill, to see in nearly 40 per cent. the chill come on with every symptom aggravated by the drug, the patient shaking with the chill, delirious with the fever, and prostrated by the sweat. It took one to three days for them to recover from the effects of the drug. At same time I did not neglect the calomel, arsenic, and tincture of iron.

Gradually the idea forced itself on my mind that *I* was wrong. I had been taught malarial attack *depressed* the system, and a stimulant tonic was necessary to tone up the nervous system, to jump the whole over the paroxysm. I came to believe that the congestion, chill and fever *were excitants* and I must *use sedatives* to counteract. I tried all that I knew of, Dover's powder, morphine, chloral. They failed. Perhaps I was wrong! Finally I thought of chloroform. Twenty drops in sugar aborted a fever after the chill had come on. I used it in over 200 cases of adults that season. But infants could not take pure chloroform; so I shook it up in sugared water, gave a teaspoonful of the water 20 minutes prior to the chill. *It did the work.* For years I used very little quinine.

In 1890 or '91, I heard of antifebrine (acetanelide). "It was sedative and diaphoretic." I got an ounce. Next day after it arrived I was called to see a nine months old infant. High fever and threatened convulsions. I gave 1 grain in a little glycerine, and in 10 minutes it was asleep and perspiring, all the unpleasant symptoms gone. Would you have given quinine to an infant with high fever and threatened convulsions? Would quinine have dissipated all the unpleasant symptoms in ten (10) minutes? It would have taken a half hour for it to have got in its work, and by that time the "blue fits,"(as Dr. Singletery of Louisiana, calls them) would have made short work with the baby,

Yet this small amount of a *sedative diaphoretic* in a few minutes, *stopped all unpleasant symptoms*, a grain or two of calomel and one little powder of acetanelide next day, and there were no more chills. How does this look along side of page 689, "give to a child 1 to 3 grains of quinine every 4 hours, regardless of the time of chill, heighth of fever, or any thing else." Great God!

One little dose of a *tasteless powder*, 20 minutes before chill time, a pleasant sleep, and perspiration and no unpleasant after effects! which would *you* choose? Now for 6 years I've used nothing else. I have a half ounce vial of quinine standing on a shelf in my office with the cork unmoved, tin foil on it, for nearly two years, and there it will continue to stand, as I believe it to be the best place for it. I use acetanelide, or some of its compounds, "zomakyne," "ammonol," "antikamnia." They are about 75 to 80 per cent. acetanelide, 5 to 6 per cent. caffein, and the ballance some pleasant alkali. Dr. Edson, of New York, says "ammonol" will abort malaria. I say all three, or acetanilide by itself, will do the same. Half a dozen doctors in Texas, 2 or 3 in Oregon, 3 in Nebraska, some in Missouri, Ohio, North Carolina, Mississippi and Louisiana, say "acetanelide will do it more effectually than quinine." Quite a number have written me: "Quinine in my practice is a failure every way and dangerous." I have several dozen letters on file, from half of the Southern and Western States, which ask information about the "new idea." Some say "your treatment is a success. I use no more quinine."

Yet in the face of these facts a doctor gets up and says, "The treatment of malaria with acetanelide is a scientific impossibility." So it may be, I dont know. What do we know about scientific treatment? Is not all treatment experimental more or less? Do you know beforehand what the effect of a dose of medicine will be on any or every patient? Can we know the reason why of the action of half of the medicines we give? For instance, a dose of morphine sets my wife and daughter wild with excitement; while my boy or myself fall dead asleep in a few minutes. We are all the same blood, why this difference in effect.

Then why say "quinine *will do so and so*," when in 40 per cent. of my cases it *does not do "so?"* Also why give a drug in 10 times the amount required to kill all the plasmodium? (1 in 20,000.) A medicine that destroys the taste, dulls the hearing, impairs the sight brings on hæmorrhages and for days afterward more or less malaise. A small dose of acetanelide aborts the chill without any of these unpleasant effects. Yet the writer above refered to says it is an "impossibility!" If he will come to my house this fall and spend afew days I will show him that it is not only a *practical possibility* but *absolute certainty.* Here is one case out of a thousand a negro man last fall came to my office for treatment for chills, I fixed up 3 capsules with 3 grains calomel and 1-10 gr, podophyllin in each, and two capsules with 6 gr. of acetanlide in each. While he was waiting he remarked, "that chill has come on *ahead of time.*" I gave him 1 each of the calomel and acetanlide capsules, told him to lie down on some sacks in my back office. He was shaking with the ague. In 10 minutes I went in to

see him; he was asleep and sweating and in an hour or so woke up and went home all right, took his medicine as directed, and no more chills. Would quinine have done this? Yet this is the every day story for 6 years.

Some have charged cyanosis on acetanlide, and say it is dangerous. A man near Chicago, last year, took 120 grains (1 fourth of an ounce) in 6 hours. He was blue for the 16 hours that it took him to get over it. It *did not kill him*, and his pulse and respiration was normal during the whole time. I do not give *that* amount, I give one to six grains *once*, 20 minutes before chill time. I have in 6 years seen 6 cases of slight cyanosis, (5 of these infants) out of several thousand cases in that time. A teaspoonful of camphor tea aborted the cyanosis in a few minutes. I think I'v said enough perhaps when I add that during that time (six years) I have not had acetanelide to fail me a single time, some will say "you've said *too much!*" For all that its a fact, now let me outline the the "new idea;" for I think a *goodly number*, who read the Journal, cannot (like myself) believe (in their hearts) quinine *is a safe or sure*, "eradicator of malarial poison from the body."

If you have a few hours before next return of chill, give, as to age, 3 to 10 grains of calomel, in grain or ½ grain doses, with podophylin 1-50 to 1-20 each dose. If you have no time prior, give 1 to 6 or 8 grains of acetanelide with 2 or 3 grains of calomel, and any of the following: Strychnia 1-120, arsenic 1-60, nitro glycerin 1-100, caffeine ¼ to ½. These will conteract any cyanosis. Let the patient lie down and he will in a few minutes be asleep and prespiring, when he has awaked give the balance of calomel and as soon as the bowels have acted well commence on the acid iron tonic, made as follows:

Nitro Muriatic acid..1 ounce or 1 pint
Sulphate of Iron.....60 grains or 2 ounces:

Nitrate potass may be substitute for the iron or added in same amount to the mixture, let stand for 24 hours, uncorked, to digest. Dose 10 to 12 drops in 3 or 4 oz. water or diluted to taste, and sweetened if desired, children 5 drops to same amount (3 or 4 oz. water.

Every one is aware of the craving for acids after fever, and the dose may be allowed 3, 5 or 6 times a day. Now 20 minutes before next chill time repeat the acetanelide as above. Let patient lie down and sleep off the chill. That is all, keep up the acid tonic till the patient "dont want any more" of it, and there is *no more malaria in him*. Mark it, Acetanelide is used *only once*, 20 minutes before the chill and only two times. Never between times. Should the fever have come on give the acetanelide, and it will abort the fever in 20 minutes.

Is this scientific? Is it not *as scientific* as any other mode? Is not success science? There is no headache, loss of sight, hearing or taste, no malaise. The patient awakes as from a pleasant dream. His appetite is good, digestion good, blood is rich, bowels are cleaned out, action is regular. Is not science "operating by a truth acertained?" Now I say for 6 years I have been *proving* this treatment *to be a truth, a fact*. On Page 687 the writer says "we have in the stomach a defective acid secretion, an increased bacterial ferment, a possible production of chemical poisons" add putrid feces and absorption into the blood. All these are cleaned out, the cause removed. The acetanelide (braced if you like by any of the tonics previously mentioned) aborts the chill and fever, brings on a sweat *which itself* helps to clean out the body, a good sweat is a good thing in many ways. The acid iron tonic acts on the liver, tones up the blood, acts on the bowels, (the nitre acts on the kidneys) and by all these increases and regulates appetite and digestion.

The Plasmodium whatever its shape (round, square, crossleged, or otherwise) skips out and *does not "come back* in 6 or 8 days." In the matter of "hæmaturia" *not following the administration of quinine.*

I believe the paroxysm of malaria is, congestion, chill, fever and sweat. The congestive stage is where the blood, leaving the skin and extremities, congregates inside the body. The circulation then becomes excited, the large vessels are engorged, if previous poisoning by malaria (which is almost always the case) the walls of the vessels are thined and very weak. The heart acts tumultuously, the throb hammer like. Now add 10. 20 or 60 grains of a powerful stimulant to this and what can you expect but that the walls are ruptured and blood thrown out on the brain, lungs, bowels or kidneys. I have seen them all. Into the brain we "backwoods" call it "congestion of brain," "infantile apoplexy." It is almost certain death (99 per cent.) under 3 years of age, and, if in the adult, a slow recovery; but the man *is never the same* afterwards. If into the lungs it is coughed out. If into the bowels is passed off- If into the kidneys we have "swamp fever," "malarial hæmaturia," (I call it "*quinine poisoning.*") The flow of urine is either checked entirely or comes mixed with pus and tinged with blood. I have seen it in 50 cases follow in a few minutes after taking the

third dose of quinine. One grain 3 times, once each hour, in children; and 3 grains, same in adults. They do not suspect it till the desire to urinate, *just after taking the third dose*, when the blood comes. Blood *that clots in the vessel* or on the ground. Twice I have seen it in my own body I can give the names of several within a few miles of my house who cannot take even a very small dose of quinine, without the hæmorrhage appearing in an hour.

In these cases of Hæmaturia, if quinine is continued in treatment, about 65 per cent. die; and 15 per cent. die if quinine is dropped and the best of all other means used.

A report recently published, of Committee appointed by "Tri-State Medical Association" to investigate the trouble; report 57 cases between 3 to 60 years of age. In only *one of these cases had quinine not* been taken previous to appearance of the blood, 56 had taken it; or 98 per cent. It seems as if this should settle the question. In neuralgia (facial) I have used for years Belladonna, P. D. & Co., fl. ext. 1 drop every 15 or 20 minutes till 3 or 4 had been taken. B. Keith & Co., consentrated tr. Atropia 2 to 5 drops half hour before attack. Clean out the bowels before hand, as I think the trouble only another form of malaria, One more question is bellodonna a "stimulant tonic?"

Dr. Ben. H. Brodnax,
Brodnax, La.

In defence of the position I took in the paper above referred to, regarding the specific action of quinine in malaria, I will say that the assertion that quinine will completely eradicate malarial poison from the body, is not, as Dr. Brodnax says, in keeping with the generally expressed opinion of the profession. It is only occasionally that we find a writer who believes that quinine will cure all forms of malarial fever, and I have been surprised to hear the favorable comments on this part of my paper. The quotation from Dr. Sikes deserves consideration, because his remarks are calculated to mislead those who have not specially studied the subject. When quinine is administered in a malarial fever, and the attack cured, the drug has produced its specific action, and if the patient is not subsequently exposed to malarial infection, the original attack will not return. I do not claim that quinine will remove all the sources of malarial infection, nor do I claim for it continued and uninterrupted protection from this disease. Because it does not possess these properties, because its protective influence is not prominent, and because it will not remove the predisposing and exciting causes of malaria, should not, and does not cripple the force of my assertion, that it will cure, if properly administered, an attack of malarial fever.

Dr. Brodnax has not quoted Dr. Royster correctly. When Dr. Royster used the words unscientific and unreliable, he was not speaking of the use of quinine in malarial fever, but of its use in auto-infection fever and typhoid fever. Dr. Royster believes in the specific action of quinine in malaria.

The Doctor says quinine failed to cure 40 per cent. of his cases of malaria. This large per cent. of failures suggest the possibility that the Doctor's diagnosis was incorrect, and that he was giving quinine for a fever that was not malarial.

We have all made numerous mistakes of this kind, and will continue to do so unless we, in addition to clinical evidences, resort to the use of the microscope in making our diagnosis in malarial fever. This large per cent. of failures further suggests that the Doctor did not give his quinine properly, or if he used it correctly, and he really was dealing with an uncomplicated malarial fever, that his patients were constantly exposed to malarial poison, and that new infection was continuously introduced into seemingly incurable malarial patients.

I will again refer to one of the Doctor's incorrect quotations. He has me responsible for the following sentence: "Give to a child 1 to 3 grains of quinine every 4 hours, regardless of the time of chill, high fever or any thing else."

I have never advocated such a plan as this nor has any such plan ever been published in our Journal. We have repeatedly observed the beautiful effects antifebrin has on the distressing and unpleasant symptoms accompanying severe malarial manifestations, but these effects are purely symptomatic, not curative.

Dr. Brodnax reports several illustrative cases, with the purpose of showing the curative effects of antifebrin in malarial fever. It is, indeed, a very common occurrence for malarial chills and fevers to disappear on their own accord, without any treatment of any kind; or possibly the Doctor's cases, especially those he refers to in children, might have been, and very probably were, cases of sudden rise of temperature, due to indigestion. It is impossible to make an early and positive diagnosis of malaria without the use of the microscope; especially is this true in children under ten years old. Further, it is impossible to arrive at any correct estimate as to the therapeutic value of antifebrin in malaria, unless its influence on the parasites is studied

microscopically; this Dr. Brodnax has not done, consequently his claims for its value are in a great measure crippled.

E. C. Register.

Letter from Dr. Woodbridge.

My dear Editor:—It is with deep regret that I again "beard the lion in his den" and criticize the Editor of a great Journal through his own columns—but this time I do so with the certainty that your only responsibility lies in admitting to your pages (with Editorial endorsement) an abstract of a paper which you had not carefully read. On page 63 (current issue) of your Journal these words appear:—"His ideas of * * * the Woodbridge treatment are so much in harmony with the views we entertain, etc., etc."

Your commendation of "his ideas of the Woodbridge treatment" brings within the sphere of legitimate criticism all of the paper which relates to that subject (See Journal of the A. M. A., Vol. 29, No. 1., pages 22 and 23,) much of which deserves the severest censure, but I pass without criticism the presumption of the author in writing at all on a subject of which he has neither practical nor theoretical knowledge. I pass too with mere mention the sublime egotism that would permit him to ridicule statements of fact based upon years of clinical experience and to question the verdict of hundreds of physicians, every one of whom is his peer in every other respect, and his superior in *this* that they speak from positive knowledge that has been gained at the bedside—while he depends upon the most unreliable of guides—the cerebration of his own fallible brain.

But Sir I cannot pass unnoticed the opprobrious language that he has used toward the best and bravest men in the medical profession, the men who at a time—not so very long ago—when "truth was crushed to the earth" and the method of treating disease at which this author flings his keen sarcasms, was ridiculed and denounced—each one ignorant of the courageous stand which the others had taken, began to send me the clinical charts of aborted cases of typhoid fever, together with kind words so much needed, of encouragement and support. It is these reports which your author stigmatizes as "testimonials." "Not worth any more than the testimonials given by hundreds to the so-called cancer cures and kidney cures, et id omni genus." He thus classes the clinical reports of learned physicians given "without the hope of fee or reward," with the bought "testimonials" of the dupes and gudgeons that quacks can always catch. The truth is that the statements of the physicians who have had sufficient experience with the method under consideration to prompt them to state in the face of certain adverse criticism that the treatment "aborts the disease" "it will certainly do all you claim for it," "it robs the disease of all its terrors," "it has made us masters of the disease," etc., etc., can neither mislead nor be altered, falsified, or manipulated, and they constitute the strongest possible evidence of the value of the treatment. I am my Dear Editor, most respectfully yours,

John Eliot Woodbridge.
637 Prospect Street, Cleveland, Ohio.

Infantile Diarrhœa and Its Treatment by Sterilized Water.

Watu advocates the treatment of infantile diarrhœa by a regimen of boiled water, cooled to a suitable temperature, and given in small quantities every hour or half hour, or as thirst demands, to the exclusion of all food, for eight, twelve or even twenty-four hours. By diluting the irritating secretions, dislodgins the debris of decomposed alimentary matter retained in the folds of the mucosa of the canal, increasing the pressure in the blood vessels and dissolving the toxins attached to the formal elements, the ingested water carries away and eliminates the poison from the system, changes the morbid character of the stools and effects a reduction of the temperature and recovery, especially when administered in acute cases at their commencement and in children not very young.

Alcohol in Childhood.

J. Comby (American Journal of Obstetrics) considers alcohol injurious to healthy children. In disease it is indicated in acute febrile diseases accompanied by adynamia, a tendency to cardiac collapse and to nervous depression. It is contra-indicated in chronic diseases, in diseases of the nervous system, in nephritis and all forms of albuminuria, in chronic dyspepsia, dilatation of the stomach, entero-colitis, acute dysentery, and disorders of the liver; also in acute articular rheumatism, in arthritic diseases, vesicular, pustular, or papular dermatoses, and in acute endo- and peri-carditis. It must not be given in conditions of anemia, langnor, and weakness; and this applies to the various alcoholic tonics advertised so generally. To avoid all irritating action alcohol should be prescribed for children in a syrup of some kind or in milk, etc. Even wines should not be given undiluted.

Pathology and Treatment of Gun-Shot Wounds of the Abdomen.

Klemm has written an interesting monograph on this subject. He reviews the literature of the subject, the results of his own experiments on dogs, and presents his conclusions from both. They correspond to all general opinions held at present by American and German surgeons. He does not believe in the expectant method of treatment advocated by the French, especially Reclus, who claims that this shows a lower mortality; that the prolapse of the mucous membrane through perforations in the hollow viscera plugs the wound till plastic exudation seals it. Klemm found that the plug so described occurred, but that it did not prevent leakage of intestinal contents when the slightest pressure was made. This was also the clinical experience of Sonnenberg and Von Bergmann. Klemm also found that the abdominal viscera were perforated in a majority of cases. In 152 clinical observations of Luck only three escaped without injury of viscera. Local symptoms of injury were noted only eight times. The general symptoms of shock or beginning peritonitis were far more frequent.

The size of the wound was determined by the angle of the direction of the striking bullet with the surface struck and by the diameter of the intestine at the point struck, When death is not immediate from hemorrhage or shock, it is caused by septic intoxication from the toxins formed by the germs in the blood-clot which is always present. Adhesions may occur, abscesses from which sooner or later rupture and cause death. Klemm condemns Senn's gas test, which he claims increases the danger of fecal extravasation. He advocates immediate operation in all cases in which the patient's condition permits it. His plan of operation corresponds with that commonly followed by American surgeons, namely, to explore the wound of entrance, and if it is found to have penetrated the abdominal cavity to open it at once. He considers the presence of peritonitis or weakness due to septic intoxication as contraindications.

The Charlotte Medical Journal:

Messrs. Editors:—I read Dr. Register's paper in the June number, and the discussion following it, about malaria and quinine with a good deal of interest, as any doctor would who has hunted malaria along the banks and bayous of the Mississippi river for 20 years, and if he has followed the sport for 21 years he is apt to think he knows how to treat ague. The doctor may be correct about withholding quinine while the temperature is above 102 deg., still I think it may be given when it is higher. My rule was formulated for myself before the clinical thermometer came into use, and was to secure a falling temperature and a cleanable tongue.

A cleanable tongue is difficult to describe, but not very difficult to recognize. If my patient had a temperature of 98.5 deg., and had a non-cleanable tongue I would keep up my quinine. I was a good deal surprised that so little was said in the paper, as well as in the discussion following it, about the unpleasant and dangerous effects that might be caused by quinine. It is not pleasant to administer a dose of quinine to a man who has no fever and then be re-called in an hour to find him as crazy as the traditional bedbug, requiring two or three attendants to keep him in passable order. This has been seen after less than five grains of quinine; and if he should also happen to have an idiosyncrasy as to arsenic, so that a few small doses of Fowler's solution makes his eyelids look like frog's eyelids, perhaps some doctor might like to know of some other sure bug killer.

A few hours of active delirium, which leaves no reminder after it, need not leave a lasting scar on the doctor's conscience. I do not envy the doctor whose patient has aural inflammation and ague. If the malarial fever is not controlled it is liable to leave the hearing impaired, and if quinine is given in the usual antiperiodic dose, in the usual manner, it is still more likely to be irrepairably injured. If this result is entirely avoided the doctor must use a good deal of skill, or have an abundant blessing of fool's good luck.

This blessing was not always mine, and I have some decidedly uncomfortable recollections about some patients who had malarial fever and dry catarrh of the middle ear, as well as of some who had middle ear inflammation. But then no one had told me of the injury quinine might do in these cases. Giving the quinine hypodermically lessens, but does not entirely eliminate the danger. Perhaps medical colleges now teach how to manage these *extra*ordinary cases better than they did when I was a student.

F. R. Millard, M. D.

San Diego, Cal.

A German statistician has calculated that of every 1,000 persons 100 reach the age of 75, 38 the age of 85, and only two reached 95. In the seventeenth century, the average duration of life was only 13 years; in the eighteenth, 20; of this century it is 36.

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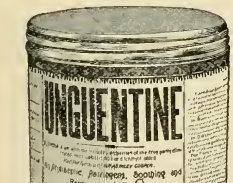

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THE BORDER LINE IN ADOLESCENCE.

The border line between sanity and insanity is apt to become a question for our consideration as early as the waning days of childhood. It is more apt, however, to be delayed until puberty has arrived and the querulous days of adolescence are ushered in. The parent, and often the physician too, are even then not impressed with the full importance of the very varied manifestations of mental instability. Not until there is some extraordinary outbreak, such as becoming incorrigible, leaving home under peculiar circumstances, or in becoming taciturn, non-communicative, moody, and desiring to be alone, is it supposed that mental unrest is the foundation for the trouble. If the parents of the individual have had sufficient foresight to see that a storm is brewing, and have planned to meet it, the case may cross the rough seas of adolescence without much danger, but if the signs have not been interpreted aright then it is that danger and extraordinary danger is imminent. Many a young life has been wrecked because of such a failure, and too often the trusted family physician is to blame because he, to whom the case was referred, has snapped his fingers flippantly and remarked that the fears of the parents are "but trifles light as air." To him sanity and insanity are psychological problems with which he believes he is familiar. His medical knowledge may be broad, but he cannot interpret mental disease, aside from the ravings of mania, the moanings of melancholia, the star gazing of paranoia, and the utopian dreams of paresis.

The finer points of diagnosis is an entirely different problem, a field of unusual clinical experience. The border line is to him a myth, a passing whim, but not so are these warnings to the physician skilled in psychological medicine. The border line of adolescence *can be seen* and recognized and the patient so directed that he will not cross over into the domain of mental disease.

It will require all of our available resources to do this, but it can be done, if the physician will but study the case; grasp the problem in its entirety and himself become its general manager. In the writer's experience parental neglect is first responsible and next the physician for the free and unlimited liberty which such patients have been given. It is folly, and uncalled for, to ignore such cases, for they are like the whirlwind when once they are set free. Death too follows in the train, either in the form of suicide or from exhaustion, the results of maniacal excitement, or excesses committed while hovering near the border line.

There is no problem of greater importance to physician and patient alike than that of adolescence, and especially should the mental phenomena of this period concern every one who has to deal with the youth of our country. The border line must be studied, its land-marks defined, and appropriate remedial measures instituted, then, and not till then, will the introspective American boy, the visionary girl cease to do such deeds as make the parents hearts bleed with anguish and leave forever in many homes the sad memory of a suicide.

INSOMNIA DUE TO GASTRO-INTESTINAL ORIGIN.

The relative curability of insomnia depends, not alone upon the correction of the pathological manifestations, but upon a judicious self-management under medical supervision.

Space will not permit a detailed notice of the multiform etiological factors of the nervous irritability manifested, but no where is the error of mistaking symptoms for causes, more strikingly exemplified than in insomnia due to gastro-intestinal origin. Cerebral hyperæmia and inhibition from disordered conditions of the stomach has been dwelt upon by many writers, and no doubt experienced by a majority of the profession. The digestive process normally occurs without consciousness and during sleep, although more sluggishly than in the waking state, and peristalsis of the gastro-intestinal canal continues as well as does the same phenomena in the arterioles during sleep; hence, why should a normal digestion prevent sleep.

For the relief of these cases we must take into consideration the condition of the gastro-intestinal canal and its auxillary organs, and the quantity and quality of food. We must curtail the quantity to a physiological standard, insist on a thorough masti-

cation, and favor gastric digestion by such medicinal means as alkalies before meals, with pepsin and acid after, with a little strychnia as indicated. The beneficial effects of bicarbonate of soda should not be forgotten in the cases complicated with dyspepsia. Constipation and torpidity of the liver should be corrected by an intelligent administration of such remedies as podophyllin, euonymin, rhamnus-purshiana, and Glauber's salts.

The efficacy of this regime will be apparent in the removal of nervous irritability, and together with a proper amount of rest, the hypochondrical fancies of a hyperæmic brain will disappear, to the benefit of the multitudinous many.

VAGINAL SECTION AND DRAINAGE FOR PELVIC ABSCESS.

The attention that is being given to this operation and the gratifying results which are being reported, induce us to refer to this comparatively new method of treatment of suppurations in the female pelvis.

This operation has frequently been referred to as a revival of the old method of treatment of pelvic abscess. Such, however, is not the fact, because when the old operation was practiced but little was known of the pathology of pelvic abscess, the pus was evacuated in a blind, uncertain and uncleanly manner with the aspirator, trocar, or by puncture, and efficient drainage was not established. One of the latest papers which described the old method of treating pelvic abscess by evacuation of the pus was written by an eminent gynæcologist about thirteen years ago. The paper referred to was, no doubt, at that time, considered to be a valuable production, but now it makes amusing reading and reminds one of a fairy tale. The old operation was abandoned because of the unfavorable results consequent upon want of cleanliness and otherwise bad technique of a blind operation for an unknown condition.

Dr. Clement Cleveland, in May, 1894, read a paper before the New York Obstetrical Society on "The Treatment of Pelvic Abscess by Vaginal Puncture and Drainage," and reported cases which demonstrated that his method was a decided improvement on the old method of treatment by puncture.

Dr. T. J. Watkins read a paper before the Chicago Gynæcological Society in May, 1895, on "Vaginal Section and Drainage for Pelvic Abscess," and reported cases showing that rapid and almost invariably permanent cures followed the operation.

Dr. F. Henrotin, in 1895, read before the American Gynæcological Society a paper on Vaginal Incision and Drainage in the Early Stages of Pelvic Inflammation, which was received with almost universal approbation. Since then valuable and interesting papers have been written on vaginal section and drainage by Drs. J. W. Long, A. W. Abbott and others.

INDICATIONS FOR THE OPERATION.

1. The operation is especially indicated for abscesses which are located posterior to the uterus and which extend down between the rectum and vagina.

2. Abscesses which have or have had a rectal fistulæ.

3. All acute pelvic suppurations which can be opened extra-peritoneally. This can be frequently done in abscesses located high in the pelvis by making the incision over the base of the broad ligament and by forcing the finger along the side of the uterus between the layers of the broad ligament.

4. Abscesses which on abdominal section can not be enucleated without great danger on account of firm intestinal adhesions.

The time seems not far distant when an attempt will first be made to cure nearly all cases of pelvic suppuration by vaginal sections and drainage. Abdominal section for pelvic suppuration will then be reserved for the cases where vaginal section and drainage fail to effect a cure.

CONTRA-INDICATIONS FOR THE OPERATION.

1. Abscesses associated with malignant disease.

2. Tubercular abscesses, or abscesses associated with tubercular peritonitis.

3. Mobile tubal or ovarian abscesses too large to be delivered through a vaginal incision.

4. Abscesses located above the brim of the pelvis.

5. Abscesses complicated by appendicitis.

In women near the menopause it is not so important to save the organs by incision and drainage as in young women.

TECHNIQUE.

The preparation of the patient and all other preparations for the operation should be as thorough for this operation as for an abdominal section. The abdomen should always be carefully prepared, as there is always a liability that an abdominal section may be necessary to terminate the operation.

Under anæsthesia the vulva and vagina should be made as clean as possible. The cervix should usually be dilated, the uterus curetted, irrigated and swabbed out with iodine, carbolic acid or the like. The vagina

and vulva are again irrigated with an antiseptic solution. With the patient in the dorsal position the perineum is retracted with a Simon speculum, and the cervix caught with a tenaculum forceps. An incision about one inch long is now made over the point most accessible to the abscess. With the finger covered with gauze any tissue between the vagina and abscess is separated from the uterus by pressure. The finger is now carried directly into the abscess. If the wall of the abscess is very firm it may be punctured with a sharp pointed scissors when the finger can be carried into it. With the two index fingers the opening can be freely dilated and if the general peritoneal cavity has not been opened irrigation may be used and two rubber drainage tubes inserted for drainage and irrigation. One tube should be large and perforated, the other small. The tubes may be sutured together at one end, the large tube split, everted and sewed so as to make a shoulder for retention of the tubes.

The tubes should be sutured to the edge of the wound or cervix to retain them in site until the walls contract about the tubes. The suture usually cuts out in about one week and then the shoulder on the tube prevents their escape.

If the peritoneal cavity is opened before the abscess is reached it should be carefully packed off with gauze before opening the abscess. No irrigation should then be used and the pus should be sponged out with gauze and the cavity packed with iodoform gauze. The gauze packing may be removed in 48 hours and the tubes inserted.

After opening the abscess, careful bimanual exploration of the pelvis should be made with one or two fingers in the abscess cavity and with the other hand on the abdomen. Other abscesses may be found and opened, or conditions may be found which will necessitate an additional operation.

AFTER-TREATMENT.

The tubes should be irrigated every 4 to 12 hours with Thiersch solution, 1 to 3, or with lysol, half per cent. solution. The use of peroxide of hydrogen helps to keep the tubes clean and to destroy the necrotic tissue.

Anodynes are seldom needed.

The tubes are left in situ as long as drainage continues which is usually two to three weeks.

REMARKS.

Although the technique of this operation seems simple, yet as a general proposition more skill is required for this operation than for an ordinary abdominal section, because one is done mostly by sight and the other by touch. To do this operation intelligently one should first have had an experience in abdominal surgery, so as to be able to recognize the different tissues and organs by touch. Without this knowledge the danger of injury of the bladder, intestines and contamination of the peritoneal cavity is very much increased.

An experienced abdominal surgeon will usually be able to open pelvic abscesses by vaginal section without invading the peritoneal cavity, and when he does open the peritoneal cavity he will at once be conscious of the fact and will treat the case accordingly without unnecessary manipulations.

THE SPREAD AND CONTROL OF LEPROSY

So insidious is the advance of some diseases that they gain a foothold in a community, or even in a continent without exciting suspicion or calling attention to themselves. In this way did pulmonary tuberculosis steal into the heart of nearly every country until, before people were aware of it, the deaths attributed to it alone were far in excess of those due to any other single disease. So quietly was all this accomplished that while it has been known for nearly ten yerrs that tuberculosis was preventable little was done until within recent years to check its steady advance.

Evidently those who should be most responsible for such a condition have taken the lesson taught by tuberculosis well to heart, for we see that there has been an international conference called by certain prominent german scientist, among whom we notice the name of Dr. Koch, to meet in Berlin during the coming October to consider the question of the control, and the spread of leprosy, and to devise the best means to check its already too rapid growth. Secretary Sherman, has been requested by these gentlemen, through the German Minister, to make widely known their invitation to American physicians to join in this conference.

Leprosy like tuberculosis, to which, in a number of ways it seems to be closely allied, is now, and has been of late years steadily and all too rapidly increasing, not only foreign countries, but we are sorry to say in America, and in the United States as well, until now it is not uncommon to hear of a case of this disease which we were accustomed, not so long ago, to consider the special property of the ancient Hebrew people, or of those residing in Eastern countries in general. It is perfectly evident that unless some active measures are at once taken, and taken systematically and thoroughly, and not spasmotically and locally,

this disease will insinuate itself in the very heart of our different communities as tuberculosis has already done, and would rapidly become all too common. It is therefore with intense gratification that we call the attention of our readers to this movement started in Germany by men whose names command respectful attention, and we most earnestly hope that throughout this broad land the work of this conference will be carefully watched and whatever recommendations it finally makes we trust will be conscientiously carried out to the letter, that we may escape a scourge only second to tuberculosis, that is even now crossing our thresholds and quietly, but surely gaining a foot-hold in our midst. It is, we are happy to say, likely to be an easier problem. this checking of leprosy, than would be the checking of tuberculosis, for one tuberculous person is a greater menace to a community for several reasons, than two lepers. The disease itself is not so readily contracted, and from its repulsive nature calls attention to itself much more quickly than does its more common but no less deadly relative which we have always in our midst, tuberculosis.

THE MEDICAL FETISH.

In sacred history we read of an invalid who at first refused advice because it was accompanied by sufficient display. The influence of fetishism observed then is felt in this nineteenth century. Signs and charms, including instances reaching from the wiles of the faith healer to the professional pretext, are as potent in their spheres as ever was a talisman. A foreign doctor may succeed where a native fails. The "old doctor" is notoriously in demand.

The various health resorts owe much of their prosperity to the same fact. Quantities of nauseous water are drunk, frequent medicated baths are taken by people who could not be persuaded to drink the same quantity of pleasant, potable water, nor to enjoy the luxury of frequent bathing in simply clean water; all illustrating the power of the fetish. It has a position among us which it may benefit us to try to understand.

A great part of the benefit received at health resorts lies in the change, and the stimulous it inspires. This advantage is none the less because it may be due to a happy delusion. The fact remains that a certain degree of good is done.

Now for the practical use of our fetish. There may be many patients whose hopes have been set on unattainable objects. They may think that a certain spring, or a trip to Europe, offers the only chance to brighten an apparently hopeless prospect, while their circumstances may make that impossible. Then it becomes our duty to try to invest the patients' surroundings with a similar charm. Point out the value of sunlight and fresh air; explain that the important difference between a bath at a hot spring and a hot bath at home is a matter of faith; show that the great difference between water drunk from a medicinal spring and that taken at home is in the quantity. Try to awaken an interest in such natural attractions as their section presents. Impress on them the fact that careful, healthy habits are as useful at home as elsewhere. Inform them that medical science and art are not geographically limited. There is a large and promising field for development along this line, in reference to which these remarks are suggestions only.

OUR MISTAKES.

If to err is human, not to err, if not inhuman, is not human. It may be stated that workers make mistakes. Our reasonable ambition should be to make as few as possible. We shall consider our mistakes as they are related to our responsibility. What is our duty in such cases? Shall we try to hide them? Or shall we make haste to publish them? When a mistake injures another, the indication is plain. Again, experimental work is worthless unless errors are given full value. Every physician is puzzled by questions of diagnosis. Before reaching a conclusion he may have been mistaken in one or more particulars, which he is under no obligation to publish. The public is interested in his conclusion, which may have been arrived at by a succession of such necessary mistakes. On the other hand, where an error harms another, every means should be used to correct it. Between these two extremes are many cases difficult of classification. A safe plan is conservatism in reference to errors. In the majority of cases most good will be done by acting only after carefully weighing the facts.

Above all we should be charitable toward the mistakes of others. It is manifestly unjust, and, in the majority of cases a misstatement on the part of a physician succeeding a colleague, to assert that matters would have been better if only he had seen the case sooner. He is eminently unfit to judge of the difficulties and embarrassments of his predecessor, and has no right to speak authoritatively of what he is ignorant.

Suppose that errors have been made, if they are not criminal, it can do no harm to refuse to discuss them or even to try to explain them away. Such a courtesy may be returned when we sorely need it, for we are "just human."

TYPHO-MALARIAL FEVER.

There is nothing that shows more clearly the ease with which error enters the mind of the average medical man, and the tenacity with which it holds its grasp upon the unreflecting and the prejudiced than what is called Typho-Malarial Fever.

In 1862, Dr. I. I. Woodward, of the United States Army imagined he had discovered a new disease with pathognomonic symptoms and distinctive pathological lesions, and published his discovery. The claim was accepted as true by some of the leading minds of the profession, and spread like a prairie fire through the masses.

Treatises were incorporated into textbooks, and reports of cases filled the pages of medical journals. Typho-malarial fever became a fad, and the *commune vulgus* followed the fashion.

Perhaps this was not strange under the circumstances. All will remember with what pertinacity, for years and centuries, professors taught and students were led to believe that malaria was simply bad air—a miasm of telluric origin; but every intelligent physician knows now that bacteriology has exploded that notion. The flood of light which the germ theory of the causation of disease has shed upon the formerly obscure science of etiology has produced a revolution in the minds of the profession. The specific pathogenic germ of many diseases have been differentiated, and the work of bacteriologists is still being devoted to efforts at further discoveries, which will surely follow.

But the most remarkable fact in relation to the so-called typho-malarial fever, is that, notwithstanding the candidly avowed confession made, several years later, by Dr. Woodward, before the International Medical Congress at Philadelphia, that he had been in error, and his admission that the pathological lesions which he claimed were peculiar, were, in fact, those of typhoid fever, many members of the profession still persist in erroneous diagnosis, still describe and treat typho-malarial fever as a distinct entity.

It was supposed by Dr. Woodward and his followers, that the conditions in which the army of Gen. McClennan were placed, in 1862, led to the evolvement of a new and peculiar disease. The factors which, it was claimed, effected this development, were '*malarial influence, crowd-poison and scorbutic taint.*" Nothing was charged to typhoid influence; it was typhus—"crowd-poison."

The army was encamped in the Chickahominy swamp; the men were crowded into small tents and their diet was largely composed of salted meat. Thus the triple factors were opined to have originated.

If it is admitted that the causes assumed to have operated, were, indeed, present in McClennan's army, and the effect claimed did actually occur, the logical inference is, that, those causes and their result, must have disappeared with a change of circumstances.

Nowhere else during the war, and nowhere in this country, since, have there been large aggregations of individuals in malarial districts, in crowded tents or houses, confined for any length of time on scurvy-producing food. So that, if it were true that McClennan's army, under its then conditions, did develop a new disease, it could not have been true of the people of the United States, afterward. It ought, therefore, to have been recognized that, after 1862, typho-malarial fever became, in slang parlance, "a back number."

But how would the germ theory have found application? Did the malarial germ combine in its malign operations with the typhus (or typhoid) germ, and they with the scurvy germ? If such a combination had been effected the result would have been a complication, not a new disease.

But typho-malarial fever was claimed to have been a hybrid. For such to have been the case there must have been, as causative agents, a hybrid germ. Is there such a thing as crop-breeding among germs? If so, which was the paternal and which the maternal ancester? This is the *reductio ad absurdum*.

Every experienced physician has seen typhoid fever complicated by malarial fever, but every such physician knows that the malarial element can be eliminated in a few hours by appropriate doses of quinine administered at the proper time.

MEDICAL VS. SURGICAL TREATMENT OF APPENDICITIS.

Within the last decade appendicitis has been transferred largely from the physician to the surgeon, especially in the centres of population. The question arises has this change been a greater benefit to the patient or the surgeon. The rule now laid down by surgeons is to operate so early that nature

gets no chance to terminate the inflammation by resolution, and before a positive diagnosis can usually be made. The first law of treatment is, to do no harm. The second law is, to do all the good possible. Is the first law being observed when the surgeon's knife is driven into tissues which are yet intact, with not the slightest sign of disintegration?

Is the second law being obeyed by the operator who exposes the peritoneum to external sepsis so long as the patient's appendix and cæcum are intact? This is at least a debatable question, with the largest clinical experience in favor of waiting for the usual evidences of pus formation, before opening the peritoneal cavity. It is self-evident to any painstaking observer that pus should be evacuated promptly. But pus rarely forms sooner than one week.

A favorite argument on the part of the surgeon is that operation prevents recurrence, even if the appendix is not found. It is more probable that the after medical and hygienic treatment remove the primary causes of appendicitis, viz.: indigestion, constipation and anæmia.

What the medical world needs to realize to-day is that there are many more cases of medical than there are of surgical appendicitis, and that nature still cures disease.

What is meant by medical appendicitis is one which under opiates to keep the bowels at rest and relieve pain, and intestinal antiseptics, terminates in resolution, the same as an acutely inflamed lung.

It is only a few years since the abdominal surgeon would open the peritoneum and cut out an unoffending ovary on any pretext. He does not do that now, neither will the conservative surgeon of the near future wage war on the vermiform appendix.

"THE TREATMENT OF PULMONARY TUBERCULOSIS."

If the amount of work done upon any particular subject is a criterion of the results obtained, it would certainly seem that the treatment of pulmonary tuberculosis must be most successful, for of no other single disease can it be said that such a volume of literature has been produced.

When, however, we look first upon the thousands upon thousands of articles, great and small, that have been written on this one theme and then turn and look upon the practical results produced, the casual observer may with justice be pardoned for feeling a certain degree of discouragement, for the apparent discrepancy between the work done and the results accomplished certainly seems to be very great.

Note, however, that we have used the words "casual observer" and "apparent" discrepancy, for to the careful observer there is revealed the germ of success that in time bids fair to make the results much more commensurable with the amount of labor expended upon this subject.

In spite of all attempts to conquer this disease by medical and other therapeutic measures, we stand today only a little in advance of where our fathers stood. The percentage of cases to the population of any given district is but little less than formerly, and the death rate still continues to range in the neighborhood of 14 per cent.

No wonder, then, that the many articles bearing the title "The Treatment of Pulmonary Tuberculosis" receive but scant courtesy at the hands of the reading medical public. To the hopeful, the far-sighted, however, there is much encouragement in certain signs of the times that seem to point to a greater measure of success in the battle with this grim reaper.

The limits of so short a note as this preclude the possibility of the discussion of this question, but from the realm of bacteriology comes encouraging news, and just as we have seen diphtheria, tetanus and many other diseases heretofore conceded a tremendous death rate, rendered comparatively harmless, by the application of bacteriological teachings, the production of artificial immunity and the development of antitoxines, so may we hope in the future to see similar results accomplished with tuberculosis. The problem is, however, an immeasurably greater one and one filled with many insurmountable difficulties. One by one these are yielding to the steady pressure of persistent work and the day is dawning at the end of which we will be able to say as we can to-day of small-pox "there was once a time when its victims were numbered by the tens of thousands."

CALOMEL AND THE CITRIC FRUITS.

At present the therapeutic position of calomel seems to be assured. Not long since it was a boycotted drug. We blame its abuse for its retirement, perhaps failing to realize that potential evil is the measure of potential good. Notwithstanding its return to favor the unpleasant possibility of ptyalism is sufficiently prominent to inspire caution. Such an accident subjects the relation of patient to physician to an unnecessary strain.

A household tradition extant in the South

is to the effect that calomel and the citric fruits in conjunction in the system cause salivation. Some two years ago the question came up, but no definite information was obtainable. The text books were silent, and more than one physician credited the popular idea. Under this stimulous some six experiments were instituted. The cases selected were strong, healthy young men, slightly indisposed. In each case it was directed that a grain of calomel be given every hour till bowels moved, and a glass of lemonade every two hours, or that a lemon be sucked every hour or oftener. The cases were carefully watched, the mouth frequently inspected, with a negative result in every case. Since then many cases which were not experiments have been observed, with a like result. Therefore there is some ground for stating that the simultaneous administration of the two agents is harmless.

VERATRUM VIRIDE AND BENZOIC ACID IN THE ECLAMPSIA OF PREGNANCY.

In the grand general advance which modern medicine is now making it could hardly be expected that so fearful and unmanageable a disease as puerperal eclampsia would not receive a considerable share of attention. It has been attacked from various quarters, and no doubt the general practitioner is better qualified to grapple with it than he used to be. We are told that there may be no albuminuria, and yet the toxin or toxins which produce the convulsions may be elaborated in the system, or what is perhaps more reasonable, may not be eliminated and the woman may fall into eclampsia before pregnancy should terminate and parturition be safely accomplished. The rule laid down by Bouchard and quoted by Clifton Edgar in his recent address on Eclampsia before the New York Academy of Medicine for determining the liability of the pregnant woman to suffer from eclampsia is the percentage of urea eliminated in the urine.

Dr. E. P. Davis, of Philadelphia, also found that when the percentage of urea fell to 1.5 stimulation of excretion resulted in distinctly favorable results in all cases which had exhibited symptoms of toxœmia Edgar continues as follows: "It is not to be inferred from this that urea causes the convulsions, for large quantities of urea may be injected into rabbits without producing toxic symptoms. Indeed Bouchard found that bile had nine times the toxic power of urea. It is generally accepted that the diminution in the amount of the urea excreted indicates kidney inadequacy, but it is not always a reliable guide. There are other substances in the urine with as great or greater poisonous qualities. Urea may be found in sufficient quantity and yet an eclamptic attack occur. Bouchard determined the toxicity of the urine by injections of the same into the circulation of rabbits." It has long been known that the urine during pregnancy is less toxic than that of non-pregnant women. Unfortunately we are still a long way from knowing exactly what the toxic agent is in eclampsia.

According to Edgar's figures in from nine to sixteen per cent. of the cases there is no albumen in the urine. In our opinion he has placed the proportion of non-albuminuric cases rather high. Still it is beyond question that a considerable number of serious cases of eclampsia have had no albuminuria. The serious perversion of metabolism in pregnancy it might be observed in passing is also evinced by the general prevalence of glycosuria in this condition. Another marked phenomenon which we are at a loss to explain satisfactorily: If any researches have been carried out to determine the possible connection of glycosuria with eclampsia we are not aware of them. So far as we know this symptom is of no serious import during pregnancy. According to Bouchard, the poisons retained in the patient's blood in pregnancy arise from:

1. Food, especially nitrogenous food, as muscle, and food containing the salts of potassium.

2. Bile.

3. Putrifaction in the intestines and absorbtion of its products.

4. Toxic materials constantly being produced by the metabolism of all the cells of the body.

To these Edgar adds "the metabolism of the fœtal tissues, as this greatly increases the toxic material in the mother's blood, for clinically we are familiar with the fact that when the fœtus dies in utero, or is delivered in the case of a living child, the eclamptic seizures usually cease.

Again, Winckel's observation that in twin and triplet pregnancies there is a greater predisposition to eclampsia has been verified by others. Moreover the tendency to eclampsia becomes greater proportionately with the advance of gestation and the consequent increase of fœtal metabolism"—while we are not disposed to take issue with Prof. Edgar upon this last assumption. Our own observation had led us to believe

that the mere uterine distension, which occurs in twin and triplet pregnancies, had (probably from the pressure upon the renal and other important blood vessels) a considerable effect in determining the eclamptic outbreak. In like manner the increased size of the womb in the latter weeks of any pregnancy has no doubt considerable effect in retarding the elimination of toxic material.

So also it might be said that the emptying of a greatly disturbed bladder has had an immediately favorable effect upon childbed convulsions. The harm which the accumulation of urine effected was most probably merely from pressure.

Of course the inference is natural that the pressure from uterine distention would have little or no effect upon those cases of eclampsia which occur very early in pregnancy nor in those comparatively rare instances in which the convulsions supervene several days after delivery. It is to our mind necessary to assume that either puerperal eclampsia is due to a number of distinct causes or is a microbic disease. To the latter view we strongly incline. It is surely more plausible to assert that eclampsia is due to poisonous activity of microbes than that rheumatic fever is. The latter view being now held by a number of skilled clinicians. (See paper by Samuel West, British Medical Journal, January 30, 1897, on "Early Feeding in Typhoid," etc.)

As to what factors may be necessary to set up the pernicious activity of toxic germs in this disease we are, of course, greatly at a loss. But, perhaps, no more so than we are to account for similar activity in diseases in which the morbific germ is known as e. g. diphtheria or pneumonia. As the frequent pressure of the specific bacilli of these diseases in the mouths and air passages of persons in health is well known, where in probably the large majority of cases they remain innocuous.

From these considerations it is evident that we must agree with Prof. Edgar's contention that of the two recognized treatments of eclampsia; the preventive and curative, the former is by far the more important, and it might be added, successful.

What he has to say about the care and treatment of a patient threatened with eclampsia in the address from which we have already so freely quoted meets in the main with our hearty approval. We cannot for want of space take up all the points of his treatment seriatim. We are especially impressed, however, with the benefits almost sure to follow his rules for dieting, bathing and gently purging the pre-eclamptic woman.

What he says about the curative treatment is also sound and well-considered. Our own experience, however, would lead us to defer emptying the uterus just as long as possible, and we think that the general feeling of the profession inclines more to non-interference with the uterine contents than it formerly did.

To all that Prof. Edgar says about the exhibition of veratum viride we cordially assent, and there seems little need, particularly in the Southern portion of our country, to exploit this exceedingly valuable remedy. The number of good names of gentlemen of our profession, distinguished alike for skill and learning, who have put themselves on record as favoring the treatment of the convulsions of child-bed by veratrum viride is already long and is constantly increasing.

There is another less familiar remedy, which has proved itself of undoubted value in the prophylactic treatment of the condition and that is benzoic acid. The credit for having used this drug as a prophylactic together with veratrum viride to control convulsions should they supervene, belongs to Dr. John J. H. Love, of Monclair, Indian Territory.

It seems a great pity that while the veratrum viride is obtaining such world-wide reputation in the treatment of eclampsia (Dr. Theophelus Parow has, we understand, advocated its claims before the last world's Congress of Obstetricians and Gynecologists). The drug which has proved itself so valuable as a congener in our experience has apparently nearly escaped notice.

It is true that Herst mentions it without comment in Hane's System of Practical Therapeutics (Vol. III, p. 893—1892). But no allusion to it in recent literature has met our eye. Except a letter from Dr. Newton, of Montclair, to the N. Y. Med. Journal. of Dec. 14th, '95, in which the claims of this drug, in. connection with the exhibition of veratrum-viride are briefly set forth, and the plan of Dr. Love of strict non-interference with the uterine contents advocated.

The drug was spoken of above as of prophylactic value in cases where albuminuria and other symptoms indicate the pre-eclamptic state. But with its great deprivative and antiseptic power over the urinary secretions it is of immense value in the convulsive stage of the disease. The convulsions can be controlled by veratrum viride given until the pulse rate falls below sixty per minute and the urinary secretion, already improved by the eliminative action of the veratrum, can be still further increased and rendered aseptic by the exhibition of the

benzoic acid. We quote from White's Materia Medica and Therapeutics (3d Am. Ed., 1895, edited by K. W. Wilcox,) p. 569: "Benzoic acid is a powerful antiseptic. The growth of many forms of bacteria is completely inhibited by a solution of 1 in 1000. When it is given by the mouth hippuric acid appears in the urine. * * * The conversion probably takes place in the kidneys. * * * Hippuric acid has been found in the urine of new-born children when benzoic acid has been given to the mother shortly before delivery. If hippuric acid is given by the mouth benzoic acid is found in the blood, but hippuric acid reappears in the urine. The hippuric acid in the urine *renders alkaline uric acid* and it stimulates and disinfects the urinary mucous membrane. It is said to be excreted by the skin and salivary glands, and thereby to increase their activity. It is slightly diuretic. Benzoic acid and its salts are antipyretic, and it is stated that they are even more powerful than salicylic acid. * * * Metabolism is believed to be generally increased."

With such physiological and therapeutic properties benzoic acid would seem to be, in conjunction with the veratrum viride, the ideal treatment for a disease in which, no matter what theory as to its etiology we may adopt, it is beyond question true that the great blood filters, i. e., the kidneys, are at fault.

This editorial has been written chiefly to call attention again to benzoic acid in the eclamptic and pre-eclamptic states (as well as in other conditions of imperfect or perverted urinary secretion.)

Dr. Love has been in the habit of giving it in the form of benzoate of potassium and has made use of the following formula, which is prescription No. 120 in Ellis's Formulary:

R	Acid benzaic	ʒ ii
	Kali bicarb	ʒ ss.
	Spts. Ether nit	ʒ i.
	Spts. Mendereri	ʒ ii.
	Syr. Limonis q s. ad	ʒ vi.

M. Sig. A tablespoonful every four hours.

So far as we know this treatment has been the most successful yet made use of in eclampsia. It is simple and harmless—even if the treatment by artificial or forced delivery were as successful as the Love method (which no one has yet claimed for it), it is a method better calculated for the wards of a maternity hospital than for private practice. We can not send all of our lying-in cases to a hospital; we can not even get a trained nurse to watch them all carefully. Not one of us can be certainly on hand the minute the first convulsion appears; (the patient may live miles away from our office) and falling from one eclamptic seizure into another she may die before help can reach her.

Having then in the combination of the two drugs mentioned a treatment so simple that any midwife can understand it, and so safe that practically no serious accident has so far been traced to the use of either drug, why should the general practitioner not make use of it?

A Dr. Potter, of Buffalo, has recently stated before the New York State Medical Society, that "veratrum viride is dangerous, uncertain and deceptive in action" in puerperal eclampsia. The doctor should give his experience, cases, dates and method of use when he condemns a remedy so generally accepted that argument upon its merits would be quite superfluous. We have merely mentioned this adverse criticism, the only one which has met our eye in recent literature, in order to recommend that the Doctor try the benzoic acid mixture with veratrum viride, and perhaps his results will be better.

DR. WOODBRIDGE DEFENDING HIS TREATMENT OF TYPHOID FEVER.

My Dear Editor:—In the current issue of your most excellent Journal, in a paper by Dr. E. C. Register, these words occur: "It has been suggested, and I believe it is correct, that it is this fever (of indigestion) that *the Woodbridge treatment so effectually aborts*." When the Editor of an influential Journal gives the weight of his approval to an erroneous suggestion, it becomes the duty of those who know of the existence of conclusive evidence to the contrary to produce it.

Permit me to say, Mr. Editor, that I am in hearty accord with most of the opinions enunciated in your paper, and that the second paragraph of it embodies more wisdom than it has often been my good fortune to have seen expressed in so few words, but do you realize the full meaning of the remark that you believe "that it is not typhoid fever that the 'Woodbridge treatment' so effectually aborts?" It means that you question the ability of many hundreds of the ablest physicians in the United States, Canada and Mexico to make a correct diagnosis of one of the commonest, and, in its typical form, one of the easiest diseases to diagnosticate, which we encounter. Without admitting for a moment that the ability of this host of physicians to diagnosticate typhoid fever can be successfully questioned, I say to you that the *evidence* that the treatment I have

advised, aborts *Typhoid Fever*, is in my possession, and it is at the service of the medical profession, but how can it be delivered? You would not publish a thousand or fifteen hundred pages of charts, clinical histories, and reports of cases—and without all this, the bare statistics will not carry conviction, and are often meaningless. I realized, therefore, that the mass of evidence rapidly accumulating on my hands, could be utilized in but one way, viz., by giving the name and address, number of cases treated, number of deaths, and the average duration of illness, of every case treated by the "Woodbridge method," together with a brief quotation from every expression of opinion on the subject, whether favorable or adverse. This I did for the paper which I presented to the Ohio State Medical Society, on the 21st of May, '97. This report dealt with 5449 cases treated, with 105 deaths. Since then I have received more than two hundred letters reporting 2449 cases treated with 45 deaths—so that the record now stands 7698 cases of typhoid fever treated with 150 deaths—a death-rate of 1.89 per cent., and an average duration of illness in the 4935 cases in which this is given, of 12.7 days. A great many of these cases were treated in hospitals—and a large number of them during epidemics or outbreaks of typhoid fever, and in many instances there were four or five cases in a single family. In other instances one or two deaths had occurred in a house, when, this treatment having been adopted, future cases were aborted. Cases have been aborted and the treatment having been discontinued too soon, or, from other cause, relapse has occurred, followed by intestinal hemorrhage, perforation and death, the necropsy showing the characteristic pathological lesions of typhoid fever. If space permitted, these evidences might be multiplied indefinitely, but the most significant fact of all—one too, that has hitherto been entirely overlooked by critics, is that, while every orator and essayest who has discussed the subject from theoretical knowledge only, and who has assailed my position as untenable, my theories as irrational and unscientific, and the treatment I advise as incapable of producing the effects claimed for it—only two of all the physicians who have written to me for directions for using it or have called me in consultation, have condemned the method, and ten others, who have made any application of it, or of any modification of it, have criticised it adversely.

Thus the validity of the theory that typhoid fever can be aborted is established by absolutely irrefutable evidence without the declaration of a single physician to that effect, and the unqualified assertions of those who have succeeded in doing this are unquestionably apodeictic evidence of the fact without any collateral proof.

Most respectfully,

JOHN ELIOT WOODBRIDGE.

Cleveland, Ohio.

It is with pleasure that I admit into the columns of this Journal the friendly reference Dr. Woodbridge has made to the paper I read before the recent meeting of the N. C. Medical Society, and further, as Dr. Woodbridge has requested it, I will endeavor to define my position regarding his treatment of typhoid fever.

While I do not fully endorse or practice in every detail the medicinal treatment of typhoid fever as he advocates it, yet I believe his plan accomplishes, when used in a modified way, better results than any means ever before suggested, and I give the Doctor credit for bringing into prominence and general practice a method that is both rational and scientific.

Our present knowledge of the cause of this fever, the character of its pathological lesions and the many conditions of the alimentary canal that can and often does influence all of its stages, would naturally suggest to any intelligent physician that the proper treatment, especially during the first week, should be eliminative and disinfecting in character. Dr. Woodbridge was probably the first to fully realize all the advantages this method possessed, and through his efforts he has brought it before the profession, with definite rules for employment. To adopt a stereotyped method of elimination, and to adhere strictly to a certain drug, or a combination of drugs, for internal disinfection is, I believe, unnecessary, and in my practice I find many objections to its adoption. I contend that we are not in a position, at present at least, to definitely estimate the abortive power of the Woodbridge treatment. The value of the above figures, and all the other statistics I have seen on the subject are, in a great measure, defective on account of the probable incorrect diagnosis in many of the cases reported.

Dr. Woodbridge says that typical typhoid fever is one of the easiest diseases diagnosed. This statement is correct, but you have to wait several days before typical signs are manifested. Before these symptoms are developed it is a very dificult disease to diagnose, besides a large majority of our cases never develop typical symptoms at all. I believe that it is impossible to make a positive clinical diagnosis in typhoid fever before the sixth day and at this stage of the disease, pathological lesions have developed

that no method of treatment will abort. If the Woodbridge treatment aborts typhoid fever, it must do it in its incipiency, before ulcerations take place, and before that stage is reached that a positive diagnosis is possible. With these ideas it was natural that I would refer to the subject in the language quoted above.

The recent discoveries of Widell may, in the near future enable us to make an early and positive diagnosis in this fever. Until then we will have to speculate, in a measure, as to the abortive power and other results of the Woodbridge treatment of typhoid fever.

E. C. Register, M. D.,
Charlotte, N. C.

BOOK REVIEWS.

A System of Practical Medicine. By American Authors. Edited by Alfred Lee Loomis, M. D., Late Professor of Pathology and Practical Medicine in the New York University, and William Gilman Thompson, M. D. Professor of Materia Medica, Therapeutics and Clinical Medicine in the New York University. To be completed in four imperial octavo volumes, containg from 900 to 1000 pages each, fully illustrated in colors and in black, Vol. I. Infectious Diseases. Just Ready. Vol. II. Diseases of the Respiratory and Circulatory System, and the Blood, Kidneys and Genito-Urinary Organs. Just Ready. Vol. III. Diseases of the Digestive System, of the Liver, Spleen, Panceas and other Glands. Gout, Rheumatism, Diabetes and Constitutional Diseases. In Press. Vol. IV. Diseases of the Nervous System and of the Muscles. Diseases of doubtful origin. Insolation, Addison's Disease, etc. In Active Preparation. For sale by Subscription. Per volume, Cloth, $5.00: Leather, $6.00: Half Morocco, $7.00. Lea Brothers & Co., Publishers, Philadelphia and New York.

The publication of the first volume of a System of Practical Medicine by American authors marked a distinct epoch in the history of the science as taught and practiced in this country. The second volume of this representative American System of Medicine follows the first in just a few months, just long enough for those who fortunately purchased the first volume to be anxiously awaiting the second volume now before us. It considers the diseases of the respiratory and circulatory system, of the mediastium, of the blood, of the kidneys, of the bladder and of the prostate gland. Out of the one thousand pages contained in this the second volume 325 are devoted to diseases of the respiratory system. You will scarcelly find each topic as completely and extensively treated as here in this volume. In regard to the treatment of disease we find this work fuller and extremely good. While we can place no detractions whatever against the excellencies found in the etiology, symptoms, diagnosis, prognosis and all complications, but as to the treatment we find almost invaluable. The next 306 pages considers the diseases of the circulatory system and mediastinum. The many and intricate diseases under this head are handled in the same masterly way. Following are treated the diseases of the blood, of the kidneys, of the bladder and the prostate gland. The practical aspects of medicine have received complete consideration in conformity with the most advanced and accepted views.

The American System of Medicine is, therefore, a work of which every Americen physican may reasonably feel proud, in which every practitioner will find a safe and trustworthy counsellor in the daily responsibilities of practice, and for which the publishers may justly and confidently anticipate a circulation unexampled in the annals of medical literature.

Eye-Strain In Health and Disease. With Special Reference to the Amelioration or Cure of Chronic Nervous Derangements Without the Aid of Drugs. By Ambrose L. Ranney, A.M., M.D., Author of "Lectures on Nervous Diseases," "The Applied Anatomy of the Nervous System," etc., etc.; Late Professor of Nervous Diseases in the Medical Department of the University of Vermont and of the Anatomy of the Nervous System in the New York Post-Graduate Medical School, etc. Illustrated with 38 Wood-cuts, One Volume, Royal Octavo, pages viii-321. Extra Cloth, Beveled Edges, $2.00, net. The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street, Philadelphia: 117 W. Forty-Second Street, New York; 9 Lakeside Building, Chicago.

We are not over crowded with works of this character, they are not only interesting to the specialist, but proves of great value to the general practitioner. The first chapter considers the bearing of eye-strain upon the duration of human life. Chapter two presents the various steps that should be taken during an examination of an eye for errors of refraction, and of the ocular muscles for anomalils of adjustment of the eyes, as to enable even a beginner in this work to come to some definite conclusions regarding the presence or absence of eye-strain without aid from specialist. The views which the author supported in his work on nervous diseases—relative to the effects of eye-strain upon the development of head-

ache, neuralgia. sleeplessness, chorea, epilepsy, nervous prostration, and insanity are reiterated here with strong clinical evidence to sustain them. The illustrations and number of cases along this line which the author cites in substitution of his views and ideas is a very interesting feature of the book. In reading the illustrations we note in the author's own words that these facts should not be lost sight of in this volume;—viz.; that none of these cases here reported took any drug while under his care, that they were chronic cases which had received no benefits from medication under skillful hands, and that many of them were made absolutely well by eye treatment alone. This work has many handsome illustrations and is beautifully printed and splendidly bound. It is a most useful book at a most opportune time.

Lectures on the Treatment of Fibroid Tumors of the Uterus, Medical, Electrical, and Surgical. By Franklin H. Martin, M. D. Chicago. The W. T. Keener Co. 1897.

Fibroid Tumors of the Uterus are thoroughly and elaborately discussed in these lectures. The varieties of the tumors are given, the etiology, symptoms, diagnosis and the different methods of treatment are clearly outlined. The fifth lecture is the one devoted to the electrical treatment. This section occupies 21 pages and is very complete. Here and there in the little volume you will find some nice cuts and illustrations.

A Text-Book of Diseases of Women. By Charles B. Penrose, M. D. Ph. D., Professor of Gynecology in the University of Pennsylvania, Surgeon to the Gyneceon Hospital, Philadelphia. Price, $3,50, net. Philadelphia. W. B. Saunders, 925 Walnut St. 1897.

This volume is a complete treatise upon the Diseases of Women from the pen of one of our most distinguished professors and clinicians. He states in the preface that this book has been written for the medical student, that he has presented the best teaching of modern gynecology untrammelled by antiquated theories or methods of treatment. The author has a rule adopted but one plan of treatment, which is a fine plan, because by having presented two or more methods of treatment confusion to the student is always the result. Another pleasant feature about the book is that all facts concerning the anatomy, physiology, and pathology have been omitted. This can be found in general text-books upon such subjects. The volume is of convenient size for handling, setting forth in concise words the science and art of Gynecology of the most modern results of investigation and experience. The style of the author is easy and clear. The extensive experience of the author has enabled him to condense the result of recent research and put it into practical shape for the benefit of both students and physicians. The illustrations are remarkably good and deserves commendation, in fact the book taken altogether is one of the best which has appeared in recent years upon this subject.

The Roller Bandage with a Chapter on Surgical Discovery. By William Barton Hopkins, M. D., Surgeon to the Pennsylvania Hospital, with illustrations. Fourth Edition, Philadelphia, J. B. Lippincott Company. 1897.

This little book will serve a good need. The proper application of the Roller Bandage can be done by very few physicians. The methhd taught in this book is by numerous illustrations. Each bandage has been applied to a living model. The illustrations are very good. A series of definitions and general rules for bandaging occupy the earlier pages of the book. A chapter on the dressing of wounds has been added to this the fourth edition of the book. The price of the book is $1.25. It is neatly printed and bound.

LITERARY NOTES.

Lippincott's Magazine for August, 1897.—The complete novel in the August issue of Lippincott's is "Two Daughters of One Race," by Edgar Fawcett. It is a domestic tale of love and blindness, with a single hero, and two heroines whose characters are in marked contrast. Its well-known author has done no better work.

"Private Barney Hogan," by Lieutenant Charles Dudley Rhodes, and "Two Letters," by Francis M. Butler, are brief and pointed army stories, the latter relating a pathetic incident of the civil war.

The other contents of this number cover in small space a wide variety of topics. Frank H. Sweet writes with full knowledge of "Bird Artists." and Joanna R. Nicholls of "The Marine Hospital Service." "On Street Names" are discussed by William Ward Crane. Dr. A. D. Benedict inquires, "Are You going to College?" and gives reasons why you should—if you are young enough and adequately prepared. M. A. De Wolfe Howe meditates on "A Similitude of Ships."

"Singing: its Past and its Posibilities," is considered by Gertrude E. Wall. By

"The Charm of the Inexact," Dr. Charles C. Abbott intends that conversational looseness of epithet and statement to which our poor humanity is prone.

Annie Steger Winston declares that "The Book which has most Benefited Me" was the school reader of her infancy. "Jonathan Hale's Book," rescued from oblivion by Edith Dickson, was a sombre. not to say gruesome work, of the sort by which juvenile piety was sought to be promoted in and about A. D. 1734. Our children are differently provided for nowadays.

The poetry of the number, all brief, is by Lillian Plunkett Ferguson, Preston Cooke Farrar, and Robert Gilbert Welsh.

The Fiction Number of Scribner's Magazine has had a wonderful record for a decade. It has made the reputation of many new writers and increased the esteem in which the old ones are held. This issue sustains the well-earned reputation. It contains six complete short stories by Rudyard Kipling, Kenneth Grahame, Frank R Stockton, Blanche Willis Howard, Molly Elliot Seawell, and Jesse Lynch Williams, and it appeals to many kinds of taste, for they are, respectively, a railroad story, a story of childhood, a farcical tale, a pathetic story, a fighting story, and a new-journalism story.

The American Monthly Review of Reviews for August devotes itself with accustomed thoroughness to the new tariff. The editor. in "The Progress of the World," discusses the subject in its general bearings, while Mr. Charles A. Conant of the New York Journal of Commerce reviews the salient features of the new law in an impartial and luminous article.

Duty of Physicians in Cases of Venereal Diseases.

Dr. Parvin of Brooklyn in the American Medical and Surgical Bulletin says:

"I think it the duty of physicians to enlighten the minds of the laity regarding the communicability of veneral diseases through matrimony. It is surprising to know how ignorant are the laity, principally the women of the better class, regarding venereal disease.

"Many an innocent woman's happiness has been blighted and health ruined forever simply by her ignorance in failing to learn of the physical condition of her prospective husband. Only recently a patient suffering with syphilis and chronic gonorrhea, of a number of years' standing, asked me as to the advisability of his marrying. His insane desire to wed was soon clashed by my drawing in colors loud the misery, not only to himself and wife, but also to his progeny.

"The anxiety of the parents to get rid of their daughters when they arrive at a marriageable age is perhaps the reason for their losing sight of this most important fact in their endeavors to consummate a settlement of the so-called 'good catch.'

"It should be the duty of family physicians to educate their patients, warn them of the surreptitious disease, which knows no class, no wealth, but which is propagated from person to person through shere neglect or ignorance.

"In this day of great discoveries, of distinct advance of medical science, nothing, it appears to me, seems more plausible and life-saving than prophylaxis.

"Why should not the innocent or ignorant layman be warned by his physician, or better still, why should not the layman demand of his prospective son-in-law a certificate from a physician stating his physical condition prior to marriage!

"Is not the syphilitic, philosophically speaking, as dangerous to mankind as the innocent sufferer of tuberculosis?

"Why not demand the physicians to report their cases of syphilis as well as tuberculosis to their respective health boards?

"It is true that isolation or antisepsis is unnecessary, but the communicability of syphilis, directly from sexual intercourse, or indirectly from towels, instruments, dishes, etc., demand that it should be obligatory for the physician to elucidate to his patients this dreaded disease, which to the mind of the layman is a dark secret."

Antagonism Between Morphine and Cocaine.

In a recent article in Longsdal's Lancet, Dr. Joseph W. Stickler, discusses the question of antagonism between the physiologic effects of morphine and cocaine. His attention was called some time since to an apparent antidotal effect of opium in case of cocaine poisoning. The patient had taken two ounces of a four per cent. solution of cocaine in about two hours. Being unable to sleep. and being very nervous after this large dose, he took about half an ounce of laudanum, which in the course of an hour relieved the nervousness and induced sleep. Except for some mental hebetude, and a sense of muscular prostration, the patient was in fair condition all the next day—well enough to attend to his business. The

author, believing this result could be explained only by the antidotal effect of the laudanum, instituted a number of experiments, on animals, and a few on man, the details of which are given in his paper; and the results confirmed his supposition as to the antagonism of the two agents. Dr. H. E. Matthews, who had assisted in the laboratory work, was called to a case of opium poisoning, in which he made a trial of cocaine as an antidote. A woman drank over two ounces of laudanum, and was seen twenty minutes later, being then in a state of great excitement. Six grains of yellow sulphide of mercury were given, which caused vomiting of a clear fluid, which had neither the color nor odor of laudanum, so it was concluded that the poison had all been absorbed. The doctor then administered hypodermically one-half grain of cocaine (presumably one of its salts). The patient became more quiet and vigorous, and subsequently a quarter grain more was given. In an hour her condition was normal. Dr. Stickler concludes his paper as follows: "In any case of opium poisoning I would first employ an emetic; then I would give hypodermically one-fourth to one half grain of cocaine; wait twenty minutes, and if no decided effect had been obtained, I would give another injection of one-fourth grain; after waiting twenty minutes I would repeat the dose if there was no manifest improvement in the case, I think three separate doses of one-quarter grain each, at intervals of twenty minutes, is the best plan to follow, on account of the very quick diffusibility of the drug, and its sustained effect. During this time I would administer coffee by mouth or rectum, as a supplementary heart stimulant, and in extreme cases employ artificial respiration. While I urge this method, I hope with becoming deference to the opinions of others concerning other plans of treatment, I urge it with the honest conviction that it is an improvement upon the atropin and permanganate of potash methods."

Asepsis and Anesthesia in Urethral Surgery.

Dr. John A. Wyeth in the New England Medical Monthly has a timely and instructive paper on this subject. He says: A urethra which is about to be incised should be made sterile, if this is possible, and the urine of such a patient should always be sterilized at least twenty-four hours before the operation, and should be kept sterile during the time of treatment. We recognize the fact that the so-called "urethral fever" is a form of septic infection. The administration of twenty drops of a mixture of one drachm of salol and two drachms of oil of gaultheria, three or four times a day, will sterilize the urine within twenty-four hours. It is also claimed that the administration of boracic acid, five grains four or five times a day, will effect the same result. We are indebted to the late Prof. R. Palmer of Louisville, Ky., for popularizing this important point in treatment. In addition to this the urethra should be irrigated with permanganate of potash (1:3000) for five minutes before the operation, or it should be thoroughly "ballooned" with this antiseptic solution by using the ordinary conical syringe introduced at the meatus, and the canal thoroughly distended with the fluid. This should be repeated three or four times, and a sufficient pressure employed to overcome the resistance of the cut-off muscles, in this way reaching the entire canal.

The second point is the question of anesthesia. The vast majority of all strictures of the urethra can be treated practically without pain with cocaine anesthesia. From the meatus to the cut-off muscles the urethra can be anesthetized by using from one to three drachms of a two- or four-per-cent. solution. The writer gives varying quantities and strengths of solution, because no given prescription would fit every case. It is his rule to study carefully the susceptibility of every new patient to this agent, and disregard of this rule has given the unfortunate results that now and then find their way into the journals. When the entire urethra is injected, one drachm of a two-per-cent. solution should first be employed, and the degree of the susceptibility of the patient, as well as the anesthetic effect produced, can be ascertained in five or ten minutes. If the anesthesia is incomplete and the patient shows no susceptibility to the drug, another drachm of the same or a stronger solution may be injected. It is also very important to remember that a patient is much more susceptible to the absorption of cocaine when it is employed for the introduction of sounds for the first few times after than at the time of the operation, for the simple reason that an incision more or less extensive has been made, which incision is covered with granulation tissue, rich in capillaries and ready and capable of absorbing under pressure a considerable quantity of cocaine. Anesthesia of the membranous portion of the urethra may be obtained by carrying the Keyes-Ultzman syringe point down to the cut-off muscle, pushing it slightly within, and injecting ten to fifteen minims of a four-per-cent. solu-

tion. Anesthesia beyond the cut-off muscle is practically impossibly, for the reason that the urine is in contact with this portion of the urethra and so dilutes the cocaine as to make it practically inefficacious. In meatotomy a few crystals applied just within the meatus, or ten minims of a six-per-cent. solution injected, limiting the application by digital closure of the canal one inch behind the opening, will effect complete anesthesia in division of the meatus or of an organic stricture here.

The Danger in Popular Drugs.

The following editorial appears in the June issues of Modern Medicine:

"We have frequently called attention in these columns to the mischievous character of coca wine in its various forms and combinations, such as 'Vin Marianna,' etc., and have been surprised to see that so few American journals have seemed to recognize the fact that it is nothing more than a solution of cocaine in an alcoholic liquor. The essential ingredients of coca wine, whatever may be the concomitants, are a strong alcoholic wine and cocaine; the wine was formerly made from the extracts of coca leaves, but at the present time the alcohol itself is commonly employed instead of the extract. It is evident that in prescribing such a combination a physician is involving his patient in the double danger of becoming an alcohol inebriate and a cocaine fiend.

"The writer has met not a few of these unfortunate subjects, and feels it his duty to utter a vigorous protest against the rapidly extending use of this pernicious preparation, and especially against the recognition of so dangerous, and we may say, meretricious, a combination of drugs by reputable, and, we must believe, well-meaning physicians.

"We are glad to note that the *British Medical Journal* is also raising its voice in warning against this danger. In a recent editorial article entitled 'Coca Wine and Its Dangers' this eminent journal remarks as follows:—

"'There is no doubt that the steadily increasing consumption of coca wine is a subject which calls for comment and investigation. We find that coca wine and other medicated wines are largely sold to people who are considered, and consider themselves, to be total abstainers. It is not uncommon to hear the mother of a family say, 'I never allow my girls to touch stimulants of any kind, but I give them each a glass of coca wine at eleven in the morning, and again at bed-time.' Originally, coca wine was made from coca leaves, but it is now commonly a solution of the alkaloid in a sweet and usually strongly alcoholic wine. According to the board of trade regulations, a wine containing a grain of any salt of cocaine to the ounce may be sold without a wine license; this may be the explanation of the frequency with which we see bottles of 'coca champagne' exhibited in the windows of the drug-stores.

"'Not long ago a physician reported that he had experienced considerable inconvenience from taking a glass of standardized coca wine which he had mistaken for an innocuous beverage. Still more recently we have been furnished with the details of the case of a man who, thinking to abjure the use of alcoholic stimulants, drank coca wine so freely that he died of delirium tremens. School mistresses as a rule have a deep-rooted belief in the efficacy of the popular drug, and give it to their pupil on the slightest provocation, in complete ignorance of the fact that they are establishing a liking not only for alcohol, but for the far more insidious and pernicious poison, cocaine. The child who is the innocent victim of cocainism is wayward in disposition, is restless and disturbed at night, and is incapable of prolonged application. The mania for taking narcotic stimulants is wide-spread, and is a distinct source of danger to the national health. It is difficult to say at present what steps should be taken, but it is obvious that at no distant date some restriction will have to be placed on the sale of coca wine and its congeners.'"

Infantile Diarrhea.

Dr. A. F. Plicque recognizes four varieties of diarrhea: (1) Simple diarrhea, caused by cold or by defects in alimentation. This should be promptly treated by regulation of the diet, and by a purgative, such as castor oil with orange juice, or sodium sulfate in sugar water. Should further medication be required, injections of starch water with from one-half to a drop of laudanum may be employed, or the internal administration of bismuth or astringents. Persistent diarrheas must be treated by opium. (2) Bilious diarrhea, which may be discriminated from green bacillary diarrhea, by the addition of a drop of nitric acid to the stains made by the fecal matter, when the characteristic violet-rose coloration will be seen. Alkaline treatment is all important; sodium bicarbonate is given at the rate of fifteen grains in twenty-four hours

for each two and one-half pounds of the child's weight, but the daily dose should never exceed more than one and one-half drachms of the alkali. Biliary diarrhea due to tuberculosis of the liver will resist all treatment. (3) Green bacillary diarrhea may be acute and cause death in one or two days, or, becoming chronic, may prove fatal from athrepsia. In addition to general hygenic measures we should give lactic acid. (4) Cholera infantum may occur during the course of either of the varieties of diarrhea alluded to. Its two special symptoms are peripheral algidity with cyanosis of the extremities, with, perhaps, rectal elevation of temperature and collapse with complete inertia, which is occasionally interrupted by by subsultus and respiratory effort.

Feeding should be insisted upon in spite of the vomiting, chicken broth being often better tolerated than milk. Milk should be given by teaspoonfuls. The medicinal treatment consists of lactic acid, hydrochloric acid and laudanum. Internal stimulants, as champagne, coffee, etc., or external ones, as hot mustard baths and injections of ether, should be employed.

Modified Cow's Milk for Infant Feeding.

The editor of the Atlantic Medical Weekly has published a very interesting article on this subject.

The importance of selecting a suitable artificial food for infants deprived of breast milk is recognized by all. Gastro-enteric disturbances and malnutrition resulting from errors in diet are directly and indirectly responsible for a large percentage of deaths in early life.

The attempt to find an efficient substitute for Nature's food has long since occupied the attention of physicians, chemists, and capitalists. As a result, the market is flooded with patent artificial baby foods. Some of them under certain circumstances are extremely valuable temporary expedients. But cow's milk, variously modified, is found to be by far the most satisfactory artificial food for the majority of infants. Comparative analysis shows that it contains the same constituents as woman's milk, namely, fat, sugar, proteids, salts, and water, but not in the same proportion. Thus, while the percentage of fat does not vary greatly, there is too little sugar and too much proteids and salts. It is the proteids, notably the casein, which make unmodified cow's milk so difficult for infant digestion. There is not only excess in quantity, but Leeds has shown that it differs chemically from that of woman's milk.

The successful modification of cow's milk depends on varying the proportion of the different constituents to meet the requirements of each individual child. Babies of the same age and weight frequently demand milk of very different composition. As stated by Holt, "reduced to its lowest terms, the problem of infant feeding consists first in obtaining the elements of the food separately, and secondly, in so combining them as to meet the needs of the case in hand."

Through the aid of milk laboratories, first established by Rotch, most excellent results have been obtained with modified milk. But the comparative inaccessibility of milk laboratories and the expense of their products render home modification a frequent necessity. And while it is impossible to reduce artificial feeding to the scientific accuracy accomplished in the laboratories, yet by careful attention to details sufficiently accurate results may be obtained to meet the requirements of most infants.

Professor Holt in his recent work on Diseases of Infancy and Childhood, gives some simple rules for home modification which are well worth the attention of every practitioner interested in infant feeding.

The ingredients necessary are cream, milk, lime-water, or sodium bicarbonate, sugar of milk, and water. For convenience and accuracy a graduate, sugar measure, siphon, bottles, cotton wool for stoppers, and if deemed necessary an Arnold's Sterilizer or a Freeman's Pasteurizer should be provided. The cream should be of a definite quality, that is, it should be fresh and contain a known percentage of fat. Common skimmed or gravity cream ordinarily contains about sixteen per cent., while centrifugal cream is somewhat richer. The daily supply of milk-sugar should be dissolved in boiling water. Now by combining varying proportions of milk, cream, and sugar solution of known strength it is possible to make up any formula desired.

Lime-water in the proportion of about one part to twenty, or sodium bicarbonate one grain to the ounce of the prepared food is required to overcome the acidity of cow's milk. When lime-water is used in equal bulk of water should be deducted from the total quantity used in the sugar of milk solution.

The inorganic salts do not demand specific attention. The dilution of milk necessary for reducing the quantity of proteids also controls the excess of salts.

Whether or not modified milk should be heated for the destruction of pathogenic germs and other bacteria depends upon circumstances. Prolonged sterilization at 212 deg., F. as a routine practice is objec-

tionable. By it the taste and color of milk are changed The casein is less easily digested. As a result there is more tendency to constipation. It is believed too that the nutritive properties of the milk are impaired to a certain extent. But in using the ordinary milk supply of large cities it is probably safer and in the long run more satisfactory to use sterilized milk.

The objectionable changes noted as resulting from sterilizing milk are believed to be due to the action of temperature above 180 deg. F. It is found that by raising the temperature from 160 deg. to 170 deg. F. most pathogenic germs are destroyed, and milk treated in that way will keep at ordinary temperature for two or three days. This process is known as Pasteurizing. It is largely and satisfactorily employed. When, however, it is possible to obtain a perfectly fresh and reliable daily supply of milk, even this procedure is not always necessary.

The Pathogenesis of Locomotor Ataxia.

In a statistical paper, read before the Neurological Section of the recent meeting of the American Medical Association at Philadelphia, Dr. L. Harrison Mettler, of Chicago, considers the various theories of the causation of locomotor ataxia.

He concludes that locomotor ataxia is not a syphilitic disease. In many cases there is no history of specific disease, and in one reported case syphilis was contracted several years after posterior spinal sclerosis had been announced by distinct symptoms. The lesions of spinal syphilis are not the same as those of locomotor ataxia. The gummatous tumors and specific inflammations of the former at best can only be a remote initiative cause of the progressive degenerative processes of the latter. It must be admitted, however, that syphilis is a most important —or at least most frequent—factor in the etiology of locomotor ataxia. It is so important and so frequent as a predisposing cause that it should always be given the first place in the suspicions of the diagnostician. The spinal trouble is only a sequel of the specific disease. The toxin of the blood somehow vitiates the histological structures of the nervous elements as to cause them to undergo degeneration under the impetus of some exciting cause. The argument that so many cases of locomotor ataxia are benefitted by antisyphilitic treatment is a fallacious one in behalf of the syphilitic nature of the disease. In the first place, all cases are not benefitted by antisyphilitic treatment. In the next place, it is the poorest sort of logic to say that because the *known* syphilitic cases *are* benefitted, therefore, the doubtful cases, though comparatively few in number, must be of syphilitic origin. In the third place, many syphilographers believe that the effects of mercurials and iodides, even in syphilis, are chiefly tonic and sustaining, while the disease is self-limited. If this be so, even the non-syphilitic cases of locomotor ataxia may at times be benefitted by the medicines named. The syphilitic poison may be only one, though a most important one, of other toxins and of other predisposing causes upon which various and numerous exciting causes may operate in the production of posterior spinal sclerosis.

In the state of our present knowledge, the position taken by Marie, of Paris, that locomotor ataxia is a syphilitic disease, is not tenable.

According to the most recent views locomotor ataxia is a more universal disease than is represented by the term posterior spinal sclerosis. It is an atrophic degeneration of the entire cerebro-spinal system of nerves from the periphery to the cortex, chiefly of the sensory elements, not excluding even the motor elements in many cases. This points to a universal predisposing cause, such as the syphilitic or other blood dyscrasia. The question naturally presents itself then, why in such a large proportion of cases, the disease limits itself to the posterior spinal column and why does it start in the lumbar region- Many explanations have been offered. Porter supposed that the condition of the posterior spinal arteries (syphilitic thickening with diminished lumen and consequent lack of nutrition) had something to do with it. Spitzka saw a reason for it in the reticulated, closely-interwoven fibrous mesh of the neuroglia in the lumbar part of Burdach's columns.

Obersteiner, adopting the prevalent view that the disease is primarily an affection of the posterior roots, thinks that the compression of these roots by the *specifically* diseased spinal membranes, where they surround the roots, is the origin of the upward degenerative process. Simple gravity, genito-spinal over-excitation, meningitis, traumatism, etc., have all been given the credit as determining factors. All these theories fail, however, when the wide distribution of the disease, with its peripheral as well as central manifestations is remembered. Doubtless any one of these various causes may account for those cases which do start in the lumbar cord, but a cause which explains only a part of a phenomenon is not from the standpoint of true science, a definite explanation. How about those cases that start, or at least show,

their symptoms first in connection with the peripheral nerves?

Dr. Mettler thinks that we must look for an explanation in the essential constitution, the histology of the nerve elements themselves. So far neither microscopy nor chemistry has helped us very much in this respect, but every indication points to the fact that the day is not far distant when we will know in what this histological change consists that favors the degenerative process. It may be an acquired change (the result of toxæmia) or an inherited change (as in the hereditary or Friedreich's form of the disease.)

This hereditary form of locomotor ataxia, as well as certain interesting embryological observations recently made in connection with the acquired form, and noted by the author, would seem to strengthen the view that in the histology of the cerebro-spinal sensory elements we must look for the real determining cause in all forms of the disease. In the words of Leyden, locomotor ataxia "may be considered as a chronic, atrophic degenerative process of the spinal cord, originating in the posterior roots and connecting itself with certain distinct embryonic fibre symptoms."

Given this peculiar histological condition, inferred by the author, in the nervous elements of certain individuals, it is readily conceivable how such an abnormality may be thrown into a state of disease or progressive degeneration any where throughout the nervous apparatus by the action of a universal poison such as the syphilitic or any other toxin floating in the blood.

The Treatment of Eczema.

Thompson, in discussing this subject, says:

Care should be taken that all internal and external causes for tracheal irritation are removed as far as possible, and the urine should always be carefully examined to see that there is no renal cause for the difficulty, as evidenced by albuminuria, phosphaturia, oxyluria, glycosuria, or polyuria, occurring in the course of such diathetic conditions as lithemia, gout, and diabetes. In regard to the methods of life he points out that the patient should be as much as possible in the open air, must eat regularly of easily digested foods, the proteid constituents of which should be present in comparatively small amounts, and that fresh vegetables are useful, such as the various salads, cresses, and similar substances. Should the eczema be present in the new-born great care should be paid to the regularity of nursing and the clothes, particularly the diapers; and as healthy surroundings as possible should be provided.

Purgatives have been much abused by the physicians of earlier times in the treatment of eczema because they have been given in excessive quantities, but their moderate use should constipation be present is an absolute necessity. At first calomel may be given in small doses, or some of the neutral salines or castor oil or the preparations of senna. As diuretics it is well to employ some of the alkaline mineral waters, and to use to a great extent a milk diet. Belladonna is sometimes useful in cases of eczema in which there is a profuse sero-fibrinous exudate. Under these circumstances two to ten drops of tincture of belladonna may be taken quite frequently, or in its stead small doses of atropine may be given. If there is a contraindication to these drugs we may employ such remedies as tannin, agaracin, and phosphate of sodium. In persons who have a distinctly malarial history quinine is to be employed both for its specific and general tonic effect, and antipyrin, colchicum, and digitalis may also be used, particularly if there is a gouty tendency or feebleness of the circulation. Strychnine is useful if there marked circulatory feebleness. In the eczema of the young, which is often dependent upon anemia in lymphatic persons, the administration of iron is often exceedingly advisable; in other cases it is better to give cod-liver oil or the iodide of iron; or in some cases if there is a tendency to arteriosclerosis we may administer iodide of potassium with good results. If there is hereditary syphilis as an underlying cause of infantile eczema the iodide of potassium in moderate doses may be useful.

Treatment of Burns.

Dr. Lutaud, according to the Medical News, rejects most of the old remedies for burns, on the ground that they are not aseptic. He retains the following:

℞	Sweet almond oil.....	12 parts
	Lime water.....	2 parts
	Salol.....	1 part

This mixture, however, is not thick enough to allow of its being applied at the end of the treatment when one wishes to produce a drying up of the burned surface, and, besides, the salol is not dissolved. For these reasons he prefers the following:

℞	Carbolized glycerin } aa.....	℥ 1
	Sweet almond oil }	
	The yolks of fresh eggs.....	No. 2.

When this mixture is beaten up it makes a sort of mayonnaise of the proper consis-

tency, and is rendered antiseptic by the carbolic acid. Its application does not cause any pain, even upon the most sensitive surfaces; on the contrary it is itself analgesic. With a forceps this salve is applied to the parts where the epithelium has been lost, and upon the burns of the third degree, and then over the whole bismuth powder is scattered. This dressing is left in place for two or three days, and is then renewed. The results have been most satisfactory. In extensive burns of the third degree, Lutaud has been able to obtain in two or three weeks a complete healing, and that without any cicatricial contraction.

The Use of Drugs in Modern Medical Practice.

At the German Congress of Internal Medicine Professor Liebreich, the well-known adversary of bacteriology and serum treatment, said that the discovery of many powerful remedies was due to systematic practical trial of a variety of substances—in fact, to the empiric method of inquiry, entirely without the assistance of theoretical considerations. (Lancet, July 17). Digitalis and iodine were notable examples of drugs which had been introduced into medical practice in this way. The recent great advances in synthetical chemistry have resulted in the formation of a host of compounds the properties of which remain for pharmacologists to investigate. Physicians may think that they are overwhelmed by the number of these new substances which are pressed on their notice; they ought, however, not to complain, but rather to welcome such extended opportunities of selection, whereby they are enabled to choose drugs appropriate to individual cases. There are remedies, such as quinine and mercury, which are specifics, inasmuch as they are directly antagonistic to the morbid process or cause of illness, but the mode of their action is as yet far from being known. Since the discovery of bacteria medical men have carefully studied the substances which are capable of destroying them, but in this connexion it is essential to take the cellular elements of the organism equally into consideration, and to avoid the error of concentrating attention exclusively on the micro-organisms, for it often happens that the bacteria associated with a given illness are not the primary cause of it, but have merely been developed to an unusual extent in consequence of the vital energies of the tissues becoming lowered from some cause or other. The bacillus of tubercle, for instance, is to be found in the lungs of healthy persons, and its development assumes the character of a pathological process only after the vitality of the pulmonary cells has been impaired. The treatment of pulmonary tuberculosis ought, therefore, to aim, not at the destruction of the bacilli, but at the restoration of the vital energy of the pulmonary cells. For this reason nourishing food and attention to hygiene are essential; cantharidin has also proved useful. The bacteriologists are of opinion that disease ought to be classified according to the bacteria which are associated with them. Would they, however, give the name of "colibacillosis" to cases of arsenical poisoning in which the bacterium coli was discovered in the heart of animals? and would they try to destroy the bacteria in preference to endeavouring to get rid of the poison? Professor Liebreich was of opinion that Professor Koch's new anti-tuberculin would not be more successful than the former preparation. With regard to Behring's diphtheria antitoxin, he said that the mortality from diphtheria is reported to have diminished since the introduction of the treatment, but competent observers like Kassowitz, of Vienna, and Rose, of Berlin, admit that they have not seen any good effect resulting from it. The history of diphtheria prevalence also shows that periods of low mortality have occasionally occurred. In conclusion, Professor Liebreich asserted that tetanus antitoxin was useless, and that the practical results of the new serum treatment had by no means come up to the expectations to which it gave rise.

Does Pregnancy Favour the Growth of Ovarian Tumour?

This question was discussed in the Cavendish Lectures by Sir John Williams (British Medical Journal). He said the question must be considered under two separate heads: (1) Does the process of gestation itself give an impulse to the growth of the tumour, and (2) does the tumour grow more rapidly after labour and during the lying-in period? With regard to the first point, in the notes of most of the cases which he had collected nothing was said about the growth of the tumour, but from certain statements it may fairly be inferred that the increase in it, if any, was slow or rapid. He judged that all tumours which, at the time of delivery, were situated entirely in Douglas's pouch or in the pelvis, by reason of their size, and all tumours smaller than the fœtal head, could not have grown rapidly or at a rate unusual apart from pregnancy. Twenty-four of the tumours are described as being small at the time

of delivery, while 94 were situated in the pelvis, all of which he regarded as small tumours, which could only have grown slowly. Again, a tumour which had accompanied two or more pregnancies could only have increased at a slow rate, although it had ultimately attained a large size. Of such cases there are 45, some of which had been pregnant twice, some three times, and some five or six times, while subjects of the the growth. The total number of these pregnancies is 131. In these the growth of the tumour must have been generally slow, and pregnancy could not have hastened it.

As to the rate of growth, he considered that such tumours as required tapping more than once in the course of pregnancy increased at a quick rate. He found that the tumour increased in size in 57 cases. To the 11 cases in which the growth was rapid were to be added 15 in which the tumour was tapped twice or oftener, making 26 cases in which the tumours grew rapidly.

Of the cases of rapid growth, the increase occurred in one after the eighth month, in another after an attack of variola; in a third after rupture of the cyst and symptoms of peritonitis, while in a fourth the tumour was growing rapidly before conception took place without tapping were therefore 3 in which the growth might be accounted for by other causes than pregnancy, leaving 8 in which pregnancy might have given the impulse to the rapid increase. In 15 cases tapping was resorted to, but there was nothing in the histories of these cases to show that pregnancy accelerated the growth of the tumour.

It should be borne in mind that ovarian tumours presented the same irregularities in the rate and mode of their growth during pregnancy as they did independently of that condition; in some cases the tumour grew rapidly before pregnancy, and ceased to grow after conception; in some it grew steadily before and during pregnancy and after delivery; in some it grew only during a part of the period of gestation, and in some after delivery only. The whole of this evidence and the small number of the cases in which the growth of the tumour was rapid, appeared to show that pregnancy exercised no influence in accelerating the growth of ovarian tumours.

Value of Antitoxin as a Therapeutic Agent.

As to the value of antitoxin as a therapeutic agent, it may be stated that when used experimentally it acts not only as a curative but also as a protective agent. If antitoxin can be brought into action before the various degenerative processes that are known to accompany diphtheria take place, it is evident that the results must be less marked, the tissues being able to carry on their ordinary functions without hindrance. The tissues do not become paralyzed or degenerated, and the organic changes so much dreaded by the physician do not make their appearance. The further advance of the disease may be checked at most stages, but nothing that can be done will enable Nature to make good immediately the structural changes that have been effected in the organs and tissues. If degenerative changes commence as early as the third day and increase progressively until the patient dies on the one hand, or, on the other, antitoxin formation intervenes in sufficient degree to enable the tissues to contend on equal terms with the bacilli, how important must it be to commence treatment at the earliest moment possible; though from the fact that the degenerations continue to become more marked every day, there seems to be little limit to the period at which the hope of effecting some good, however slight, should be abandoned.

The Necessity of Special Institutions for the Treatment of Pulmonary Tuberculosis.

Dr. A. C. Klebs read a paper with the above title at the recent meeting of the Tri-State Medical Society.

He said (N. Y. Medical Journal) the formation of these special institutions, which are the best and most practical schools for the treatment of pulmonary tuberculosis, as the sanatoria abroad and the few in this country have already demonstrated by their beneficial influence.

Such institutions, provided that they fulfill all requirements, have a beneficial influence, not only by the successful treatment carried out in them, but, in a general way, more by the training of a number of patients, who, mingling again with the public, help to propagate the correct ideas about the disease and its prevention and treatment. The great advantage, he says, which the sanatorium treatment has over all others is the possibility of supervising the mode of life of the patients; consequently there is almost always a guarantee that the prescriptions will be carried out. The hygienic-dietetic plan, which, he thinks, should occupy the first position in the treatment in such institutions, demands constant supervision. Tuberculous patients are very forgetful and need reminding daily. The methods adapted to the individual require

an exact knowledge of the patient's physical condition as well as his general disposition, and the physician in such an institution can ascertain this easily.

In this country, continues the author, it is but lately that the importance of special institutions has provoked general interest, and it is chiefly through the indefatigable efforts of Dr. Trudeau in the Saranac Sanatorium that the importance of such institutions has received some attention. Dr. Klebs has no doubt that, owing to the progress which is being made in practical medical education and hygiene, a general movement toward the effective preventive and curative treatment of this dreaded disease will be made. The objection has often been raised, he says, that the association of a great number of affected persons in special institutions is a danger not only for the patients themselves but for the immediate surroundings. This objection, however, has become void, since it has been conclusively proved that the danger of infection in such institutions, provided they are well equipped and properly managed, is entirely avoidable, and in every case much less than the one which is constantly threatening in public buildings, hotels, schools, railway depots, railroad cars, ships, etc., where the dangerous factor of infection, expectoration, is not properly taken care of. By proper measures, he continues, a separation of progressing cases can be made possible, especially by the adoption of the cottage plan, which has been introduced by Dr. Trudeau, and has given such excellent results, especially in the treatment of incipient cases. More advanced cases have to be treated in such buildings which offer greater facilities for the strictest supervision, and often results can be obtained where, seemingly, no hope is left. The alleged disadvantages are not to be compared to the great advantages regarding the benefit of the patients themselves, and the spread of healthy and correct ideas about the disease and its treatment.

It is obvious, the author goes on to say, that, in order to get the best possible results in the contruction and management, certain requirements have to be strictly fulfilled. Penzold gives in his masterly treatise on the subject the rules which have to be adhered to, in order to fulfill all necessary requirements. His points are: Favorable situation in pure air, protection from winds, near mountains and forests, amid gardens or parks, hygienic conditions of buildings in respect to the situation of rooms, ventilation, heating, etc.; comfortable opportunities for rest out of doors (special galleries, verandas, and balconies, for this purpose); absolute cleanliness, especially in regard to expectoration, and excellent cuisine and dairy; direction of the institution by an energetic physician, who is well trained in every respect, but especially in phthisicotherapy, and who has absolute personal authority over the patients; well-trained assistants—physicians in sufficient number and well-trained nurses; removal from home surroundings; impossibility of all excesses; and exclusion if intercurrent complications.

The combination of these different requirements produces satisfactory and lasting effects, and special institutions enable, in the most thorough way, the carrying out of a combination of different therapeutic mersures, which can not be done to the same extent at home. The nature of the disease demands the most careful consideration of details, both mentally and physically. Much, of course, depends on the capacity of the directing physician; on his energy and tact. The work, if it is carried out properly, demands seriousness, perseverance, and energy from those connected with it.

Dr. Klebs gives a brief account of the treatment carried out in the sanatorium in Citronelle, Alabama, and states that the strength of the community has favored marvelous accomplishments in a short time, and that it will not allow the decrease of this strength by its worst enemy, tuberculosis, and that it will combat the disease by united forces acting in the best directions.

The Recognition of Diabetes by Examination of the Blood.

That a swift and certain diagnosis of diabetes may be made by the examination of a single droplet of blood will appear strange to most readers, but Bremer shows how this may be effected by the aid of the microscope, in demonstrating the grape sugar reaction in that vital fluid. He says:

"Mix equal volumes of saturated solutions of eosin and methylene-blue, and pour the mixture on a filter as soon as the precipitate ceases to fall. Collect the precipitate, after washing on the filter, dry it carefully, and pulverize it very finely. To this powder add 24 parts of eosin, and 6 parts of methylene-blue, also in fine powder. This will make a reddish-brown powder.

The blood to be examined is spread in a very thin layer over a cover-glass, another cover-glass being smeared with a drop from some person known to be healthy, the latter serving for purposes of comparison.

After drying, put the two cover-glasses simultaneously in a mixture of alcohol and ether in equal parts, put over the water-

bath, and let boil for four minutes. Remove and put into a solution made by dissolving from 25 mgm. to 5 cgm. of the mixed powder described above, in 10 gm. of 33 per cent. alcohol (alcohol 1 part, distilled water 2 parts). This solution, we should remark, should be freshly prepared on each occasion that it is required.

Leave the covers in the stain for about four minutes, remove, rinse with water, and examine under the microscope. If diabetes be present in the person whose blood is under examination, the latter will be coloured a blue black, while normal blood takes on a red violet. In all cases, where possible, for the sake of absolute certainty, the urine should be tested for glucose by any of the well-known reactions."

Mechanism and Treatment of Perineal Lacerations.

This was the title of the paper presented to the American Medical Association by Dr. Joseph Price, of Philadelphia. He said:

Many men say they have never ruptured a perineum. Such a statement can have but one explanation. More attention should be directed to perineal lacerations, and the functions of the tissues involved should be better studied. Attempts at repair should be undertaken only after a full apprenticeship has been served in delicate mechanics. Nature despises blundering as she does a vacuum. Completeness should be the chief aim in plastic surgery of the perineum, and the attempt made to restore the parts to as near the normal as possible. Every perineal tear begins on the inside. Outside tears without internal laceration are of extreme rarity. One should remember always that the skin may not be lacerated in very extensive tears. Complete tears include all muscle and fascial tissues, and should be repaired in the line of their anatomical construction. Flap-splitting operations are misleading and fallacious, superficial procedures, not going to the real origin. An end-to-end adaptation of the torn muscle must be substituted for them. The Emmet operation is the foundation for all operations in deep tears, either with or without involvement of the sphincter. The sphincter is a distinct anatomical unit. When the sphincter ani is ruptured, the muscle is straightened, the depressions on either side of the anus being caused by the retraction of the torn ends. Short strong needles and good silver wire, a needle-holder without lock, a shot compressor and tenaculum are all that is required. The restoration of the pelvic floor is the ideal operation for the exaggerated tears, as shown in Baker-Brown's book.

The Late New Medical Discovery.

It is time, perhaps, that we were calling a halt in what heretofore has usually been our but too ready recognition and acceptance of the "late new medical discovery" something, in the meantime, that has never failed to put in its appearance, from time to time, in medicine, inviting and insisting on our adoption of it in our practice.

In medicine, as in many other things, the old Latin adage, *festina lente*—hasten slowly—could not be too carefully observed by us, as by such observance it would often "from many a blunder free us and foolish notion." How much better, for instance, would it have been had we preserved a "masterly inactivity" towards the Brown-Sequard elixer; proposing to take from senility its decay, and to restore it to youthful vigor again? Yet not a few were the lives that were sacrificed, and no little was the injury otherwise done in our tentative experiments with this "discovery" before it was finally shown to be only an absurd fancy based on no tenable foundation.

Again: suppose we had gone "slow"—to express it ordinarily—in our adoption and experimental uses of tuberculine which, coming in with a still greater flourish of trumpets, claimed to be a certain cure for what has ever been that great approbrium of medicine, or tuberculosis? How many were the fatalities from this, also, before, in numberless experiments with it? It was found to be only deleterious for the most part and thrown aside as such.

In the next place we have Pasteur's "great discovery" for the prevention and cure of rabies, with its various "institutes," visited by patients as they would go to a madstone—a discovery, however, that has also not been free from its more direct fatal results, and which, probably, boasts of but little or no better success in the treatment of mad-dog bites than the delusive madstone. With the latter, however, having the important advantage over it of doing no harm if it does no good.

We notice last in this connection the recent much-vaunted cure for diphtheria, or Antitoxine, which now, after due experimentation, has proven such a potent agent within itself for mischief—even sometimes causing rapid death—as now to be employed with such misgiving and hesitation as ere long can only relegate it to the rear

and include it among the delusive errors of the past.

As many of our so-called new medical discoveries therefore are but too often shown in the end to be like those just named—more or less positively injurious—and to be more dreaded than the disease, so the question occurs whether, as before remarked, the time has not come when a halt is not rather demanded of us in what has generally been our too-ready recognition and acceptance of these discoveries?

May it not be regarded as singular, in fact, that medical men still continue to "catch" at these "late discoveries" before there has as yet been any fair test of them, and when in their further test of them the result might be the loss of some one's life?

This, as it is known, has but too often been the result of this further test, and thus this subject becomes one of the highest consideration and importance to us as a profession. It is not for us to ignore, but to welcome, the new "find" in medicine that comes to us of duly tested and properly proven merit; but further than this, in this respect, justice to our profession and the interests of society forbid us going.

J. B. S.

Rapid Death After Labor from Infectious Meningitis from the Pneumococcus.

Crouzat reports a case of death occurring soon after labor from an unusual cause. (British Med. Journal). The patient had presented no abnormal symptoms in pregnancy; her confinement (the twelfth) and the first day of the puerperium were also physiological. Without any premonitory symptoms, she passed suddenly into a state of coma, and in less than twenty-four hours she was dead. The urine examined at the time of labor was free from albumen. The following was the history: Two days after her confinement she complained of pain in the head, and after a few slight convulsive movements became comatose. The urine now contained a small quantity of albumen, but this soon afterwards disappeared again. The head was turned backwards, she kept grinding her teeth and bitting her tongue, and the limbs showed some degree of contracture. The lower extremities showed diminished sensibility on the left side, but hyperesthesia on the right. A purgative was ordered; inhalations of oxygen, ice to the head, and injections of caffeine and ether were given. The diagnosis rested between meningeal hemorrhage and slowly progressing tuberculous meningitis. There was marked inequality of the pupils, and the *tache meningitique* of Trousseau was very apparent. Death followed in a few hours; and at the necropsy the kidneys were found to be normal, but the meningeal vessels were greatly congested, and although there were no hemorrhages, all the cerebral vessels beneath the pia mater and at the base of the brain were marked out by tracks of pus. There was no trace of tubercle. There were old adhesions between the left lung and the pleura. The pus contained the pneumococcus of Talamon-Fraenkel and no other micro-organism. The subcutaneous inoculation of a rabbit with pus caused death by septicemia in forty-eight hours. The author can give no explanation of the source of the pneumococcus.

Resection of the Cervical Sympathetic.

Two cases of resection of the cervical sympathetic for exophthalmic goitre have just been published by two French surgeons, and each operation has resulted in complete success. The first case was reported to the Academy of Medicine by Reclus, and the operation was performed by Faure. The patient was a woman, aged twenty-one years, who developed exophthalmic goitre after her third pregnancy. She suffered from salivation, polyuria, crises of diarrhœa, marked tremblings, sensations of heat and cold, feebleness of the legs, very marked exophthalmos, and tachycardia. Electrical treatment brought about some amelioration of the symptoms, but soon all the phenomena reappeared. The eyelids failed to cover the eyes and corneal ulceration commenced; the thyroid was enormously hypertrophied, the apex beat so markedly as to raise the chest wall, the pulse-rate increased from 120 to 130, and her hair began to fall off. At length the presence of tuberculous masses in the neck and chest was clearly to be made out. Faure accordingly performed the following operation after the method laid down by M. Jaboulay, of Lyons. An incision twelve centimetres long was made on the right side of the neck just behind the sterno-mastoid muscles, the cervical branch of the spinal accessory was divided, and the superficial and deep cervical plexus came into view. The vascular and nervous structures lying in front of the vertebral column were separated and pulled forwards, and behind them the great sympathetic came into view. The superior cervical ganglion was picked up and the afferent branches as far as the middle ganglion removed. Then some seven centimetres of the great sympathetic were resected. A similar operation, but complicated by the removal of some tuberculous glands, was performed upon the left

side. During the operation there was no change noticeable in the pulse or in the condition of the thyroid, but by the evening the pulse was less rapid and the patient slept. On the seventh day after the operation the exophthalmos was much less, and, the patient being able to close her eyes, the corneal ulcer began to heal. The circumference of the neck had diminished from 39 centimetres to 36; the pulse-rate had fallen to 90; and the tremors, the salivation, and the diarrhœa disappeared. The second case was reported to the Academy of Medicine at the next meeting by Marchant. The patient was a woman with a neurotic family history. In March, 1896, exophthalmos appeared after a pregnancy, in August thyroid hypertrophy commenced, and in January, 1897, tremors. The exophthalmos was extreme and the eyelids did not cover the eyeballs. The goitre was specially marked on the right side. The pulse-rate was 80 while the patient was at rest and became 100 on moving. The heart was normal, and at this time the tremors were well marked. Marchant then operated. An incision was made in the line of the sterno-mastoid muscle, the various vascular and nervous structures were lifted up, and the great sympathetic was found lying on the deep muscles of the neck. To make certain, the nerve was exposed as far as the superior cervical gangloin. Four centimetres of the nerve were then resected from above the superior gangloin, to below the level of the middle gangloin, which is often absent. The nerve was cut on each side successively. The operator began on the left side, and a sub-conjunctival ecchymosis appeared in the right eye, due probably, as in the experiments of Dastre and Morat, to excitation of the central end of the nerve by the forceps. After the operation the pupils contracted, the eyelids diminished, and the goitre disappeared by about the twelfth day. Later, some of the phenomena returned in a much less marked form, but still obvious. As Marchant says, there is still much to be learned.

Twins from a Single Ovule.

Dr. Stephenson (Brit. Med. Jour.) On November 8 I was called to attend Mrs. W., aged twenty-eight, in her third confinement. On examining her I found the head presenting; I ruptured the membranes, and in a short time delivered her of a well-developed male child. On placing my hand over the uterus to express the placentæ, I felt a second child in utero, and on examination per vaginam found another head presenting. I immediately ruptured the membranes, and about a quarter of an hour afterward delivered her of a second equally well developed male child. On carefully examining the placentæ after expression I found two placentæ in close apposition, fused into a single mass, a separate cord to each almost joining at their insertion; the vessels of the one appearing to anastomose with those of the other. The whole placental mass was surrounded by one chorion, inclosing two distinct amnions. This was evidently a case of twins developed from a single ovule containing a double germ, a condition I believe to be somewhat rare, and conformed to the rule laid down by Schroeder, that in these cases the children are always of the same sex, and generally males.

Although both fetuses were exceptionally well developed, presented by the vertex, and were inclosed in a single chorion, there was not the slightest difficulty or delay in the birth of the first child.

On inquiring into the family history I find the patient's mother had only one child, her husband died six months after, and she did not marry again; but the grandmother gave birth to twins, both of which were females.

Gonorrhea in Women from a Medico-Legal Standpoint.

Neisser (Journal of the Medical Sciences) says that it is impossible to determine the time at which infection occurred, since its course differs so widely in different subjects. When the cervical canal is affected, but not the urethra, symptoms may be absent. The writer denies the truth of the statement that obscure acute gonorrheal infection in the female may cause a chronic discharge in the male; the gonococci always possess the same virulence, and when they come in contact with healthy mucous membrane produce an acute inflammation. This explains the violent gonorrheal attacks in newly married women whose husbands regard themselves as entirely cured, and also the similar acute infection of men after intercourse with women whose physicians had discharged them as free from disease. In both instances the secretion is found to contain a few scattered cocci, which are found only after a long search. In the chronic cases the characteristic appearance of the gonococci within the cells is often wanting, and the culture test is frequently unsatisfactory. In short, the microscopical diagnosis is often exceedingly difficult. Still, this is the only one which should be admitted as positive in a court of law. Dr. Simon has recorded the following interesting case: A man aged 37 years was accused of hav-

ing committed rape upon a little girl five years of age, and of having infected her with gonorrhea. An examination of the greenish pus which escaped from her vagina showed that it contained Neisser's cocci. The accused denied that he had had urethritis or any venereal trouble since an attack of clap fifteen years before, which had been promptly cured. Careful and repeated examinations of his urethra showed an entire absence of any abnormal secretion. A bacteriological examination of the urinary sediment demonstrated the presence of numerous epithelial cells containing bodies which somewhat resembled gonococci, but which, when subjected to staining by Gram's method, failed to respond to the ordinary test. Under these circumstances it was impossible for the expert to submit a positive opinion. Hence the inference that, when the question of the specific nature of an old urethral discharge is to be decided, too much reliance should not be placed on the bacteriological evidence. Even when cocci are demonstrated in the vaginal secretion, the origin of the infection, whether direct or accidental, may remain in doubt.

The Custom of Weaning Newly-Born Children.

Dr. Angel Money says this custom is entirely too prevalent and too few attempts are made to correct the milk when at fault. (British Medical Journal). A thorough investigation of mother and milk should be made, and the quantity and quality of the latter determined and the percentage of fat and proteid, which are the only variable factors, ascertained. Bad milk contains toxic matters, albumoses, and leucomains, albumin being plentiful, but of the wrong kind, while the percentage of fat is defective; colostrum corpuscles are present and may be numerous. The most successful milk is that of mothers desirous and confident of ability to nurse. Exercise can diminish percentage of proteids, and a moderate amount of beef or mutton can increase percentage of fats; these facts are seldom acted upon. A poor milk may be enriched by improving the maternal dietary, giving more meat and more milk, diminishing exercise, shortening intervals of nursing, and diminishing amount of liquids imbibed. Rich milk may be diluted by lengthening the intervals of nursing, decreasing the amount of meat eaten, increasing exercise, augmenting fluid drunk; drinking rain or distilled water, Helidon, or Vichy water, midway between the nurslings, is an excellent practice. Colostrum corpuscles present after the first fortnight signify defective formation of milk. It is unjustifiable to diminish the water in pure milk by purgation, which may stop milk flow, or may even cause the milk to contain toxic substances. The breast pump is not sufficiently used to improve the function of lactation; it should replace the baby while attempts are being made to improve the milk. The more perfectly-formed the milk is, the more caseinogen and less albumin it contains; however great the percentage of caseinogen, it never in the stomach forms dense clots as formed by cow's milk. It is a mistake to suppose that stout or porter improves milk. Another error is the belief that beef-tea and chicken-broth are good for nursing mothers. Excitement, fatigue, and over-feeding should be avoided; also highly-spiced, rich, or stimulating foods. The bowels should be regulated by proper dieting and massage or exercise, rather than by laxatives, and it is highly desirable that there should be at night uninterrupted sleep for six hours for mother and child.

Laryngeal Vertigo.

Dr. O. Schadewaldt of Berlin (Journal of Laryn.) has had seven cases of this affection under his care. The first is of special interest.

A gentleman consulted him in 1879 on account of hoarseness resulting from laryngitis. A cure was effected in two months. Fourteen years later the patient, now aged fifty-nine, returned, complaining of tickling in the larynx, troublesome cough and difficulty in breathing on exertion. He appeared healthy, and the larynx was found normal. The cough was due to chronic bronchial catarrh. During violent paroxysms of coughing the face became bluish-red and the eyes prominent. Such attacks were especially frequent during meals.

The patient also mentioned that on several occasions he had become unconscious for a very short time, and had sometimes fallen during a fit of coughing. He had paid but little attention to the occurrence, however, as he felt quite well immediately afterwards. The author gives an account of an attack he witnessed. The patient had just finished supper and lit a cigar, the first whiff of which appeared to irritate the throat, for he coughed moderately, his face became bluish, and he immediately lost consciousness. The features were rigid but quite composed, the eyes open and staring; he breathed quietly and maintained his seat without letting the head sink. After five seconds at the most he came to himself, and looked around

smiling as if awaking from a refreshing sleep. He was quite himself immediately, and in a few minutes had forgotten the occurrence. Under climatic and dietetic treatment the cough was removed, and the attacks of laryngeal vertigo ceased for at least a year. Quite unexpectedly, however, he had an attack one evening similar to that above described. The following day, while conversing, the usual cough returned, he became unconscious, fell, and died in a moment.

There are only about fifty cases of laryngeal vertigo on record, the small number being probably due to the fact that persons suffering from this affection almost always seek medical advise solely on account of the subjective sensations in the upper air passages, and make no mention of the attacks of giddiness.

Laryngeal vertigo is merely a symptom. It is distinguished from fainting by occurring almost invariably in men, by its sudden onset, and by the patient's face becoming congested; and from spasm of the glottis, by the absence of any alarming symptom indicating long-continued closure of the glottis. Further, it has nothing to do with tabes, for as a rule it occurs without this condition being present, although the latter may be accompanied by laryngeal crises which assume the appearance of laryngeal vertigo. It is independent also of epilepsy; not one of the author's patients was an epileptic. Convulsions and subsequent exhaustion were absent.

The author explains the mechanism of the attacks as follows:—The irritation of the superior laryngeal passes to the expiratory centre, and excites the fits of coughing; at the same time it influences the inhibitory cardiac centre and causes cessation of the heart's action and consequent cerebral anæmia and loss of consciousness.

A certain pathological state must exist before these attacks can take place. Garel and Collet regard changes in the vessels due to age and arthritic conditions as the predisposing cause. The author attaches importance to alcoholism, all of his patients but one having been heavy drinkers.

The prognosis hitherto has been favourable, perhaps because the cases have not been sufficiently long observed. A cure is not to be looked for from symptomatic treatment, but rather by controlling the predisposing fundamental condition.

Sunshine as a Disinfectant.

The scientists appear to be finding out that the order of nature is about as nearly perfect as is necessary for the health and comfort of man. So much is said regarding microbes that one may think that poison and death lurk in every nook and by-path, to say nothing of the vast air ocean that surrounds us. Now it is being discovered that light and free air are sanitary agents of the most powerful kind known. Sunlight is potent to destroy poisonous gases and pernicious bacilli. So that no better method for disinfection exists than exposure to the sun's rays. How far such disinfection might go has been shown by experiments.

Arloing proved that anthrax bacilli are destroyed by the solar rays. Koch has shown that tubercle bacilli cannot be exposed to the same for very long and survive. Fermi and Celli, in a series of experiments, demonstrated that germs in aqueous suspension are likewise killed, and Raspe asserts that the sun is able to hinder the development and even destroy bacilli lying on the surface of the soil or submerged in water.

The Internal Treatment of Eczema.

Besnier in the Edinburgh Medical Journal says: 1. If pruritus is present an absolute milk diet must be ordered, since so many articles make it worse—tea, coffee, alcohol, veal, pork, fish, tomatoes, etc. No medicine should be given until the case has been under observation for some time, since there are few drugs which may not increase the pruritus. The urine must be examined for uric acid, sugar, albumen, oxaluria, phosphaturia, and peptonuria, and the patient's organs and functions thoroughly overhauled. With infants diet is of still greater importance: (*a*) The most harmless cutaneous antispasmodics are asafœtida and musk in doses up to 30 gr., and valerian in various forms. (*b*) Carbolic acid sometimes succeeds, but the dose must be large—3 to 6 gr. in twenty-four hours in pills, after meals. (*c*) Atropine or its valerianiate in doses of $\frac{1}{200}$ gr. almost always allays irritation. More than $\frac{1}{130}$ to 1-63 gr. in twenty-four hours should be given only exceptionally. (*d*) Opium is generally contra-indicated, being itself a frequent cause of pruritus, but it is sometimes useful for the insomnia. (*e*) For the latter sulphonal or trional in doses up to 30 gr. in twenty-four hours much surer and generally well borne by the skin. (*f*) Chloral and the bromides alone or together act both as analgesics and hypnotics. In children bromide of potassium is alone suitable. It must be given every evening for four or five days, and then left off for a like time. Otherwise bromide rashes are frequent. The dose must not exceed 3 gr. under 3 months, 6 gr. under 6 months, 9 gr. under 1 year, and 15 gr. un-

der 2 years. (*g*) Antipyrin and better phenacetin sometimes act, but many skins are intolerant of both. (*h*) Salicylate of sodium may be used, but does not suit every eczema. 2. Special drugs and mineral waters. None of these exert a sufficiently specific action on eczema to do away for the need of local treatment: (*a*) Arsenic is useful in chronic cases, such as the dry psoriasiform and lichenous forms. It does not suit acute cases or chronic during subacute exacerbations, with the exception of some varieties limited to the extremities or the head, or in certain individuals. Some patients cannot take arsenic at all, as it causes dyspepsia, palpitations, etc. It may then be given hypodermically, 1 to 4 minims of Fowler's solution in water. All the usual preparations may be given, or arsenical waters such as "la Bourboule." The most effective dose varies with each patient. (*b*) Alkalies. In cases with a gouty diathesis, bicarbonate of sodium acts well. The dose must be moderate if given for a long time. Salicylate or benzoates of sodium and alkaline mineral waters must be used according to the patient's constitution rather than the particular form of eczema. For instance a course at Royat benefits diabetic patients especially. (*c*) Sulphur in small doses is very useful with young anæmic, "lymphatic," or tuberculous patients. It is contra-indicated in neurotic or cardiac cases, or when the eczema is recent and acute. It is best given as natural sulphur waters and the patient may be sent for a course at any of the numerous sulphur baths, such as Uriage, though ichthyol may be given as an alternative.

Diagnosis and Treatment of Uretritis in Women.

Dr. Reynolds, in the Medical and Surgical Bulletin, says that the two most characteristic symptoms of ureteritis are: (1) Frequent micturition, increased by the erect posture; and (2) a bearing-down pain, increased on standing, but usually completely relieved by a few hours' rest in bed. Vaginal examination elicits tenderness and a desire to urinate on making pressure over the vaginal portion of the ureter. Cystoscopic examination usually shows gaping or redness and swelling of the ureteral orifice or of the adjacent mucous membrane. In eight cases of ureteritis in which he had catheterized both ureters it had been found that the percentage of urea was in every instance decreased in the urine obtained from the diseased side. Where the ureteral orifice and adjacent vesical mucous membrane were inflamed, relief would usually follow the strictly localized application of solid nitrate of silver. The patient should be made to drink three or four pints of water, should avoid asparagus and strawberries, and should partake sparingly of other fruits and the highly flavored vegetables. This condition, he thought, was often mistaken for renal colic or for acute catarrhal salpingitis. At the beginning of the attack there would be renal tenderness on deep pressure, and later on there would be tenderness located at McBurney's point. Still later a new spot of tenderness would be found at a point about one inch above Poupart's ligament.

Headaches from Nasal Causes.

In the Medical News, July 10th, 1897, Dr. Snow speaks at considerable length on the literature of this subject, mentioning papers written by Drs. Harrison Allen, John O. Roe and himself, as being among the first productions by American writers.

Those of Hack of Frieburg, Bresgen, Frankfurt, as probably the first from European sources.

Due credit was given to Neurologists and Ophthalmologists for the work they have and are doing towards the relief of cephalagia of a reflex nature, but he sites a record of thirty private cases, that were sent, usually as a last resort suffering with severer forms of headaches, more of the hemicranial order. Out of this list of 30, seven reported to have received relief to the extent of about 40%, five 75%, ten 90% and eight 100%. Sixteen of them have been under observation from three to five years. Sixty per cent. of the whole number were from 30 to 40 years of age. Seventy per cent. appear to be due to pressure in middle turbinate regions. Another notable fact was that of those reported as showing 100% relief, the whole number eight, received a full and thorough operative course. All points of contact and pressures within the nose having been removed.

Dr. Snow states that operative work in these cases is what brings the most brilliant results, though care should be taken not to impair the natural function of the nose. He assumes that this will relieve 75% of all headaches from nasal causes but points out the fact that there are still some patients that are not fully relieved by removing all pressures and contacts. His opinion being that most of these recurring attacks are produced by the irritable and sensitive condition of the membranes. He mentions as another possible explanation that these obstinate cases as advanced in the theory by M. Hajek of Vienna as due to a stasis, that veins pas-

sing through the Lamina Cribrosa turn and again enter the nasal cavities. It is noticed though that these obstinate recurring cases are kept very comfortable, if weekly or biweekly treatments be given to keep their relaxed and sensitive membranes in proper tone. For relieving acute headaches from nasal congestion of any sort, a gentle spraying of the parts with an Iodole and Ether mixture, three grains to an ounce, gives most pleasing results. If the membranes are too sensitive and this spray produces too much smarting pain, the patient may be instructed to breathe over the application quickly, or it may be preceded by a light 2% Cocaine spray.

The proposition contained in his former paper that there were certain number of headaches that could be cured, or at least relieved by the proper treatment on pressures or contacts within the nose, has been amplified and proved true by the added experience of himself and other observers during the past four years, there now seems to be no question but that patients suffering with Clavus, Sick Headaches, Pressures on top of the Head, or Deep Frontal Headaches should have their nasal membranes put in the best possible condition.

Bill Before the Kansas Legislature.

According to Medicine a bill is about to pass the Kansas Legislature which provides that every person that shall be convicted of rape, and every person who shall be convicted of incest, and every minister, clergyman, priest or teacher, having charge of any church or other religious body or school, who shall have illicit connection with any unmarried virgin female under twenty-one years of age of his charge or school; and every guardian of any female ward under the age of eighteen (18) years who shall defile her, shall be punished by imprisonment at hard labor for a period not less than five or more than twenty years, and in addition to such punishment he shall be castrated.

In all cases where the defendant shall be convicted of any of the offences specified in the foregoing section, the court shall, when pronouncing judgment upon the defendant, order that the prisoner shall, after the expiration of one year from the date of his arrival at the penal institution in which he is to be confined, and within eighteen months from the date of the sentence, be castrated by the medical officer of such penal institution; which order shall be a part of the final judgment in such case, and a certified transcript of which order and judgment shall be delivered with the prisoner to the principal officer of the penal institution in which the prisoner is to be confined.

In any case where the order for such operation has been carried into effect under the provisions of this Act, and after two months from the time of such operation, the Governor may, if satisfied that the prisoner will lead a peaceful and orderly life, issue to such prisoner a parole or conditional pardon, to be valid only during the good behavior of such person.

If the bill should become a law it will be interesting. It will be noticed that the bill practically places seduction and incest in the same category as rape. It is to be presumed that in Kansas there will be no difficulty in defining the use of the word "defile" as applied to guardians and wards.

Renal Diseases in Relation to Disturbances of the Alimentary Tract.

Dr. Wm. Vissman read a paper on this subject at a recent meeting of the New York County Medical Society. (American Medical and Surgical Bulletin.) He said that it had been shown that the ingestion of urea, even in large quantity, did not produce the poisonous effects that one would expect. The kidney was commonly affected in three ways, viz:

1. The epithelial lining of the tubules was involved.
2. The interstitial tissue was involved.
3. Both were affected.

Children suffering from acute diarrhœa often show all the symptoms of uremia, from coma to convulsions, yet generally nothing would be found in the kidneys further than a cloudy swelling. In such cases thorough irrigation of the intestine usually gave such prompt relief as to indicate quite plainly the source of these apparently urgent symptoms. It was probable that bacteria enter the blood from the intestine, and are, to some extent at least, excreted through the urine. He had found that if sterilized cultures of tubercle bacilli were introduced into the ear vein of rabbits, there would follow hemorrhages into the renal glomeruli and interstitial tissues, and later, there would be infiltration of round cells. A similar infiltration occurred in the liver and lungs. The administration of tuberculin greatly intensified this result. Other experimenters had shown that the toxins of diphtheria, administered hypodermically, are as capable of producing nephritis as are the bacilli themselves. Many persons suffer from slight disturbances of the alimentary canal without considering

themselves sick, yet such individuals are often found to be voiding a urine which, when injected into animals, proves to be decidedly poisonous. In persons leading sedentary lives, the urine often contains abnormal and toxic products constantly for years, and is not infrequently the primary cause of such nephritis.

Gonorrheal Vulvo-Vaginitis in Small Girls.

Dr. A. B. Marfan (Edinburgh Medical Journal) says: Vulvo-vaginitis is mostly of gonorrheal origin, especially the inflammatory kind. It occurs between the second and seventh year, but it may happen in the first fifteen days after birth; and it is rare after the seventh year, as there are less chances for infection.

Spots on the shirt and a severe itching sensation are usually the first signs which induce the physician to examine the child.

The discharge is not limited only to the vulva, the vagina is taken in too. If kept unclean the discharge dries up in yellowish crusts, which emit a very disagreeable smell and cover erosions of the mucous membrane. The lips are swollen and slightly painful. In most cases vulvo-vaginitis is of gonorrheal origin, but there are cases of vulvo-vaginitis due to other causes, as saprophytic, pyodermic, etc. If the vulvo-vaginitis be from the beginning inflammatory and purulent, and if it does not yield in a few days to simple cleanliness, we may accept it as gonorrheal.

The source of contagion may be divided in (1) family source, (2) hospital source (thermometer, etc.), (3) school source (closets), and (4) venereal sources. The last one is the smallest in number. Beside the local troubles, vulvo-vaginitis is very important on account of the metastases it produces by (1) propagation, (2) by inoculation, and (3) by general infection. By propagation every organ in the genito-urinary tract may be attacked; the bladder alone is an exception, as in infants it is mostly due to coli-bacillus, but the peritoneum gives rise to serious, sometimes mortal results. Gonorrhea is of the four important causes of peritonitis, (appendicitis, pneumococcic infection and typhoid fever) the most frequent. By inoculation gonococcus may be transferred to the eye, and by general infection it may produce arthritis, endocarditis and pleuritis.

Gonorrheal arthritis was seen in children of 12 to 18 days of age, while the rheumatism of non-gonorrheal origin is seldom seen before the fifth year. It attacks usually one joint and remains stationary at that joint, not jumping from one to another as in non-gonorrheal rheumatism.

The joint is painful, swollen, hot, covered with an extended, shiny, red skin. The involution sometimes takes place without any incidents, and the prognosis is more favorable than in non-gonorrheal rheumatism.

Mostly the knee-joint is affected, but the infection may extend to other joints: wrist, malleolus, to small articulations of the hand and foot, and the coxo-femoral joint. Sometimes the synovial capsules are also involved.

Treatment consists in checking the propagation and curing the affected parts.

Luke-warm solution (1:1000) of R. H. applied daily as a wash to the external genital and urinary organs and inside of the vagina will give the best results. This is to be continued for a period of three weeks.

In chronic cases when the R. H. washings fail, sublimate of mercury solution of 1:10000, nitrate of silver 1:3000 may be used; and iodoform bougies will be of service. The treatment of rheumatic joints is limited to absolute immobilization with subsequent massage. But we must bear in mind not to prolong the immobilization and not to begin the massage too early, as the process may be revived. Internally, salicylate of soda, salophen and antipyrin may be given. Locally a 10 per cent. salicylic ointment is advisable if the child does not tolerate internal remedies. In purulent arthritis with abundant amount of pus, a puncture and later arthrotomy is indicated, although gonorrheal pus is sometimes absorbed without interference.

Diphtheria of the Umbilicus.

Dr. Pitts, in the Lancet, reports a case in a child fourteen days of age. The mother and a brother were ill with diphtheria. The cord separated on the eighth day. There was a brawny red indurated area, devoid of epidermis and about the size of a five-shilling piece, surrounding the umbilicus. The wound continued to discharge offensive pus, and there was an opening about one inch in depth in the sloughing umbilicus. The child's condition was good. There were an occasional inspiratory crow and a slight cyanosis. The Klebs-Loeffler bacillus was discovered in the pus escaping from the umbilicus. The child gradually weakened and died within two days. Examination after death showed larynx and pharynx normal. The local lesion had not extended to other organs.

The Secretary of the American Medical Association.

The editor of the Cleveland Journal of Medicine deals with this matter in unmistakeable language. He says:

Universal comment upon the inability of the Permanent Secretary of the American Medical Association to properly attend to the duties of his position was heard at the Philadelphia meeting and is to be found in many of the journals now in their remarks upon that meeting. The position is a life one, and properly so it would seem. Many attempts to remove the present incumbent have been made in the past by making the position requiring annual election, which is an awkward way of reaching the desired result. Such attempts have been met by promises from the friends of the present incumbent that if allowed to serve one more year he would then resign. As these promises have dissipated in thin air, the time has come to speak plainly upon the matter. The future success of the Association depends in large degree upon the placing in the position of permanent secretary a young man of high aims and possessed of administrative ability, who will work untiringly for the welfare of the Association. It is a difficult position and deserves adequate remuneration.

To avoid further scandal and occurrences more deplorable than those of the past, the friends of the present secretary should see that he does now, or before the Denver meeting, resign and allow a younger and more capable man to have the place. This matter, while unpleasant, is one of utmost importance to the welfare of the Association, as has been keenly realized by all who have attended the meetings of the last few years. If the journals and the leading members take this matter in hand in the proper spirit it can be settled promptly and satisfactorily. Delay will certainly be detrimental to the best interests of the Association.

Rex Hospital, Raleigh, N. C.

The News and Observer of July 29th contains the following notice regarding the new hospital:

Raleigh moves forward. The completion and equipment of the new operating room at Rex Hospital marks an era in this onward march. Through the beneficience and hard work of the Ladies' Hospital Aid Association, organized just a year ago, it has at last been made possible to equip a surgical operating room, of which the hospital authorities, and, indeed, the whole city may be proud. The room itself is a thing of beauty. The floor is of white tiling, finished around the sides and corners with delicate blue borders in pretty design, while the wainscoting, five feet in height, is of the same material—glazed white tiles. The walls and ceiling are of soap-stone finish, also pale blue-grey in color.

All the walls in the hospital are finished in this same material. The plumbing—pipes, stationary basins, etc., in the room are in pure white. At any time a hose can be turned on in the room, washing it from top to bottom and the water allowed to run off in a perforated drain pipe in one corner. The floor is slightly graded down to this point.

The most prominent and useful feature about the room is the furniture that it contains. Most of this was put in yesterday. It is all of the latest, most modern pattern, white enameled iron, with plate glass—and as light and serviceable as it could well be. The operating table (Boldt's latest model) is very neat and durable, easily moved on the large rubber rollers and capable of being placed in almost any position. It is the first one of the kind ever brought to the State. The other furniture is of the same quality as the table—up-to-date and eternally durable. One or two other pieces have not come, but are expected shortly. A complete sterilizing apparatus has also been ordered. Steam sterilization is absolutely essential for good results in surgical work at the present day. When thoroughly completed, this room will be the finest in the State and will compare favorably with any in the South. It has all the necessary requirements for any modern operating room, such as is seen in Philadelphia, New York or Baltimore.

Besides the operating room, the new addition contains the anæsthetizing room, the drug room and dispensary, and five private rooms. These latter have new furniture, white enameled beds, stained floors, and their ventilation is perfect. In the winter these will be heated by steam.

Rex Hospital still continues to do its beneficent work in the community. There are twenty patients under treatment there now—many of them being private patients. The hospital is proud of its record and results, and the good that it is doing can never be over-estimated.

The New Mexico Territorial Board of Health recently recommended the use of the patent medicine almanacs as receptacles for the sputum of consumptives.

Should Mothers Resume Nursing their Infants after Febrile Disease.

Dr. Bue, according to "Treatment," says that in many cases the question is solved by the disappearance of the milk, but sometimes, even after an attack of typhoid fever, a nursing mother finds that she has still a supply of milk and resumes nursing. There are many diseases which are now classified as infective, such as pneumonia, some forms of tonsillitis, and septic disorders during the puerperium, which are only of short duration, and in which the mothers may be in some doubt as to whether it is necessary to wean their infant. It can be demonstrated in some cases that the bacillus, which is the cause of the mother's illness, is contained in her milk, and that that is of poor quality; but it has been maintained by some that even if the bacilli are present the gastric juice may be relied on to destroy them. This, however, is over-confidence. It is true that many organisms are destroyed by normal gastric juice, but the acidity varies from time to time; and in states of feeble health, just when the danger of infection would be greatest, its antiseptic qualities could be least relied on. It is established by experiments on animals that tuberculosis can be acquired in young animals through tubercular milk, and the conclusion at which Dr. Bue arrives is that the medical man, while always advocating the nursing of infants by their mothers when the latter are healthy, should, in the interests alike of the mother and of the child, forbid it if the mother is attacked by any acute or chronic disease.

Hydrocele--Treatment Of.

Dr. Moir (Annals of Surgery] believes that in the radical cure of hydrocele the aim should be complete obliteration of the sac. This is obtained with greater certainty by the methods of incision or excision. In the latter the object is attained by the adhesion of the two layers of the tunica vaginalis, and not by restoring the equilibrium between the functions of secretion and absorption; but the tunica vaginalis behaves in a capricious manner when subjected to the injection of irritant fluids, and one is never sure what will be the degree of pain inflicted, or as to the extent of the inflammatory reaction. Moreover, in many cases the adhesions are only partial or non-existent, and in some the secretion and inflammatory exudation after injection are in excess of the original condition, and this fluid is not absorbed. Incision or excision, combined with drainage and packing of the cavity, aim at obliteration of the cavity by the growth of granulation tissue; the amount of inflammatory reaction is trifling, and can be better controlled. Also the actual condition of the testis, epididymis, and cord can be ascertained with greater accuracy. The chief objection to the method is that the after treatment is often painful, owing to the removal of the lint or gauze packing, which becomes adherent to the interior of the cavity. Also the repacking may not be thoroughly done, and some pocket or crevice may escape and become the starting place of another hydrocele.

Woman as a Milk Producer.

The following instructive item appeared in "The Hospital" July 10, 1897:

The use of human milk in the rearing of human infants is much to be commended, and although, by dint of care and some intelligence, the artificial rearing of infants is often attended with great success, there can be no doubt that in the majority of cases the natural nutriment, if of good quality, is by far the best form of food in the early days of infancy. Considerable interest therefore attaches to the observations lately reported by Dr. Budin to the Obstetrical Society of France on "The Production of Milk by Wet-Nurses." In the ward for nurslings at the Maternity Dr. Budin had had as many as fifty children, in addition to the fourteen children belonging to the wet-nurses employed, and the problem he had to solve was how to make the milk of fourteen women do for sixty-four children—in other words, how to make the most out of these women as human "milkers." By a kind of systematic training he found that the milk was gradually increased, and he was able to satisfy himself that this increase in quantity was not brought about at the expense of quality. He found also that an indispensable condition for obtaining large quantities of milk was to require the nurses to suckle the infants freely. The more the milk was drawn the more was the quantity supplied, within reasonable limits. All this is in accordance with what is well known in regard to the yield of milk by cows. It is generally recognised in dairies that for the regular and abundant secretion of milk it is absolutely necessary that the supply should be thoroughly exhausted at each milking, and that if the milker is negligent, and does not take the trouble to empty the udder every time, the secretion rapidly ceases. Perhaps this is the explanation of the fact that to prevent the mother's

milk from drying up it is often of great benefit to change the child, and to give a woman who has, perhaps, barely enough for one child one or two other babies to suckle. The result not infrequently is that a plentiful flow results, the reason being that the one child has not properly emptied the breasts, which have in consequence tended to dry up. To many women all this will sound very horrible—lowering to the sex, and all the rest of it. Women undoubtedly exist who even look upon maternity as a somewhat degrading affair, and what they will say to this use of women as milk producers we do not know. We do know, however, that woman's milk is the proper food for human infants, and we are inclined to think that a woman may be doing a nobler thing, and certainly be doing better for humanity, by so utilising her milk-producing capacity as to set two or three children on their feet for life, than were she to employ her powers, say, in writing a novel.

Rendering of Animals Immune Against the Venom of the Cobra and Other Serpents.

Fraser in the British Medical Journal gives the results of some interestings experiments with the venom from different serpents. That of the cobra was most largely used, though rattle-snake-poison gave the same results as did the venom from the brown and black snake of Australia. The lethal dose was first found, using guinea-pigs, rabbits, cats, and harmless snakes as subjects. It was found that the action of the poison was twofold—the action on the general system and the local action.

In immunizing animals it was found that the action on the functions was much more quickly and easily controlled than the local action. It was found after many experiments that rabbits could by the use of gradually increasing doses become accustomed to twenty, thirty, and forty times the minimum lethal dose. The duration of immunity has not been definitely determined, but large doses have been given as long as twenty days after immunization with no effect whatsoever.

The blood-serum of immunized animals was used to give protection to animals from lethal doses of the poison. To this serum the term *antivenene* is applied, and the experiments proved positively that this antivenene is able in varying conditions of administration to perfectly prevent lethal doses of the venom of the most poisonous animals from producing death in unprotected animals.

It is proposed to carry on experiments and obtain the antivenene in large quantities in order that its applicability to the cure of snake-bites in man may be tested in India, where there is an annual mortality of 20,000 from this accident.

The Fate of the Bromides in the System of Epileptics.

Dr. R. Laubeuncimer (British Medical Journal) has for the last two years examined the urine and fæces of epileptics before and during their treatment with sodium bromide with a view of determining the exact amount of bromide which is retained in the body.

He found that contrary to the orthodox belief enormous quantities of bromide are retained. A patient who took 80 grammes of bromide of sodium daily, had after ten days excreted an amount of bromide equivalent to 39 grms. of bromide of sodium and retained the rest (41 grms.); another who had in three days taken 27 grms. excreted only 8 grms.; a third who had been given 27 grms. retained as much as 21·5 grms. Before the experiments were commenced the patients had not taken bromides far a period of some weeks in order to render the system perfectly free from them.

The saving up of bromides (bromisation) does not go on for an indefinite period. After the system has been thoroughly saturated with bromides, which usually takes place in from 14 to 21 days after the commencement of the treatment, no more bromides are stored up, but they are excreted in a quantity nearly equal to that ingested. "The equilibrium of bromine has been established."

The author believes that the specific antiepileptic action of the bromides does not make itself felt before the establishment of this "equilibrium," also that the epileptic fits recur directly this deposit of bromides sinks below this amount.

Another interesting feature is that to a certain extent bromine breaks up the chlorides in the body. A patient who had retained 36 grms. out of 70 grms. administered within seven days, had during the same period taken with his food 67 grms. of sodium chloride; he secreted 93 grms. of sodium chloride in the urine, and lost therefore 26 grms. of sodium chlorides. Considering the enormous importance of the chlorides in the blood and the tissues for the metabolism of the body, it is more than probable that the considerable diminution of the amount of the chlorides in the blood may be one of the chief causes of bromism.

The excretion of nitrogen was apparently not affected, that of phosphoric acid was somewhat diminished.

Hydrocyanic Acid an Antidote to Chloroform

Hobday in the British Medical Journal says: Having observed that the respiratory center is usually paralyzed first when death occurred during chloroform anæsthesia, I thought hydrocyanic acid might prove of service as an antidote where the breathing was becoming shallow and weak, on account of the rapid and powerful temporary exciting effect this drug exerts on the respiratory center. This led me to experiment, and in thirty-one cases the administration of hydrocyanic acid successfully combated chloroform poisoning in dogs. In eleven instances the treatment was successful. These observations lead fairly to the conclusions that hydrocyanic acid is of value as an antidote to chloroform, its beneficial effects being due to its property (when given in certain doses) of rapidly and violent stimulating and exciting temporarily the respiratory and cardiac centers, and so counteracting the depressant and paralyzing effects of chloroform. The drug should be placed on the back of the tongue or injected hypodermatically. In all the cases Scheele's acid was used, on account of its strength and consequent rapidity of action. For animals I consider one minim of Scheele's acid for every seven or eight pounds of body weight a fair average dose, It is well not to be too anxious to administer a second dose till perfectly sure the first has been futile. The question may be raised as to the proportion of cases that would have recovered under artificial respiration alone, but my observations lead me to believe that the use of the acid gives an enormously higher proportion of successes.

A Case of Cerebral Abscess; Trephining; Recovery.

Cotterell has reported (Journal of Laryn.) a very interesting case, a man of twenty-three years, complaining of great pain in the head, of ten days' duration. He had had intermittent right otorrhœa since eighteen months old. Whenever it ceased cephalalgia came on. This was relieved and the discharge re-established by the use of warm boric lotions and fomentations. This time, however, these means had failed. He was dazed, constantly dropping asleep; his cerebration was slow, and he frequently moaned in his sleep. Anorexia and fœtid breath were present. Temperature, 101·2 deg.; pulse, 70 to 80; respiration, 16 to 18. No œdema, and only slight tenderness on deep pressure over the mastoid; no vomiting, shivering, or disturbance of the third nerve. The mastoid antrum was explored and found to contain a few drops of pus, the bone being very dense. The immediate result of this was—temperature fell to 97·4 deg., pulse to 60, and respiration to 16. For three days these all became normal, and then suddenly fell to—temperature, 97 deg.; pulse, 52; respiration, 14; and pain became more intense. The sigmoid sinus was explored and found healthy, but an abscess was found and evacuated in the temporo-sphenoidal lobe. The patient was so well by the tenth day that the tube into the abscess was removed, but had to be replaced five days later for a return of symptoms, two ounces of fœtid pus being removed. It was then eventually removed three weeks latter, the patient making a good recovery. The author points out the effect the tension fever had of masking the more serious lesion.

Electrolysis of Small Growths.

Dr. Bennett (Journal of Electro-Therapeutics) says that the removal of small growths by electrolysis is "quick, safe, painless, aseptic, bloodless, and leaves very little or no scar, and is the ideal and most rational method."

The doctor has removed corns, warts, moles, hemorrhoids, papillomata, nævi, epithelioma, condylomata, superfluous hairs, osteomata, etc., by this method.

If the patient is nervous, and especially in women and children, use cocaine locally, either externally or subcutaneously. Insert one or more needles, held firmly in a suitable needle-holder electrode, well under the base of the growth, so as to be sure to get it all; then connect the electrode with the cathode of a galvanic battery. Apply the anode to some indifferent part of the body. Now turn on the current gradually until minute bubbles appear around the needles; let an even current flow from three to thirty minutes, according to the density of the tissue and the extent of the work to be done. Shut off the current, withdraw the needles, reintroduce them in right angles to their previous position, and turn on the current as before. If carefully done, the growth blanches at once, turns black in a few days, dessicates and falls off, leaving a healthy surface, that heals without a scar. The only dressing needed is an ointment of the yellow oxide of mercury. Always allow nature to cast off the blackened tissue.

The Chemistry and Pathology of Gout.

Dr. Arthur P. Luff, in the British Medical Journal, deals with this subject as follows:

1. Uric acid is not normally present in the blood of man and other animals, nor in the blood of birds.

2. Uric acid is normally produced only in the kidneys.

3. Uric acid is normally formed from urea, probably by conjugation of that substance with glycocine in the kidneys.

4. Uric acid is present in the blood in gout as the soluble sodium quadriurate. In its soluble form it is not a toxic agent. It deposits from the blood as sodium biurate, which acts passively and physically as a foreign body in the tissues or organs in which it is deposited.

5. The presence of uric acid in the blood in gout is due to its deficient excretion by the kidneys, and to the subsequent absorption of the non-excreted portion into the blood from the organs.

6. Gout is probably always preceded by some affection of the kidneys, functional or organic, which interferes with the proper excretion of uric acid. The probable seat of the kidney affection giving rise to gout is in the epithelium of the convoluted tubes.

7. In certain blood diseases and disorders accompanied by leucocytosis uric acid is formed within the system from nuclein. Under such circumstances it passes at once into the blood and is rapidly eliminated by the kidneys.

8. The solubility of uric acid in the blood is not affected by a diminished alkalinity of the blood produced by the addition of organic acids.

9. The deposition of sodium biurate is not accelerated by a diminution of the alkalinity of blood.

10. An increased alkalinity of the blood does not increase the solubility of deposits of biurate.

11. The saline constituents of vegetables exercise a remarkable inhibitory power over the decomposition of sodium quadriurate.

12. The solubility of sodium biurate is increased by the presence of the saline constituents of vegetables.

13. The solubility of sodium biurate in the blood is diminished by the presence of the saline constituents of meat.

14. The gout inducing properties of certain wines are not due to their acidity. Probably they owe their gout-inducing action to the effect they must exercise on the liver.

Indications for the Removal of the Uterus and the Ovaries when Operating for Septic Pelvic Diseases.

Dr. Heurotin, of Chicago, gives the following as rules bearing upon this subject.

1. In operating for pelvic septic disease, either by the abdomen or the vagina, the condition of the ovaries should be the first object of special consideration, and no part of such an organ, when apparently healthy, should be removed. 2. When the ovaries, an ovary, or a part of an ovary is left, the uterus should never be removed unless it is the seat of otherwise incurable disease. 3. The removal of diseased Fallopian tubes, even in their entirety, is no warrant for the removal of healthy ovaries or a healthy uterus. 4. Even if the tubes and ovaries are entirely removed, the uterus should be spared, if its removal will entail appreciable increase in the danger of the operation to the patient. 5. In very young patients, or such as have what is known as infantile uteri, the uterus need not be removed. 6. In the vast majority of cases, when, in operating in pelvic abscess, it becomes necessary to remove the ovaries, it is most advisable to also remove the uterus, because it serves no further purpose in the economy and because it remains a serious element for future harmfulness. 7. When, in operating by the abdominal method, the cervix is found apparently healthy, it is advisable to make a supravaginal amputation and to leave the cervix, putting in stay stitches, as recommended by Baldy, to prevent displacement of pelvic fasciæ.

With greater experience to be gained principally by examination of ablated uteri, we may learn to distinguish inoffensive varieties, and, if so, will leave all such undisturbed, for the smallest atom of human flesh which is harmless and does not disfigure should always be sacred to the surgeon.

Treatment of Abscess of the Lung.

Dr. Carl Beck (American Medical Association) says abscess of the lung is not a rare condition. Its attempted cure should be by purely surgical principles. The diagnosis is much easier than its localization. The absence of tuberculous manifestations and exploratory puncture point to this condition. The principles of treatment consist of thorough evacuation of the pus and drainage. Particular care should be employed in rendering the skin aseptic, twenty-four hours being devoted to the purpose. If no adhesions exist the lung may collapse.

Palpation of the lung area and the introduction of the needle into the lung may locate the pus focus. The Paquelin cautery thrust into the suspected portion is a useful aid in diagnosis; then one should introduce a director and watch for the pus. After the cavity is exposed, no irrigation is necessary. Iodoform gauze should be packed into the cavity. After the operation small doses of morphine may be given. At the end of a week strophanthus and caffeine are advised. Anæsthesia should be given only when the patient is able to stand it. Even cocaine has its dangers.

Insanity and Inebriety.

We clip the following from the editorial columns of the Quarterly Journal of Inebriety:

"The fact is startling that insanity has increased in proportion to the population over 100 per cent. from 1870 to 1890. The feeble-minded, idiots and epileptics have also increased. Inebriety as a disease has come into more and more prominence during the last quarter of a century, but whether inebriety has increased in anything like the same ratio as insanity is not certain. The opinion is sustained by strong evidence that inebriety in modern times is obscure insanity. It is certain that many cases of inebriety become insane, and an equal number are classed with the insane in statistics. A certain number of cases of insanity have an early stage of excessive drinking, and a number of insane persons will turn to spirits for relief and become inebriates. A number of cases become insane when the alcohol is withdrawn, and a number alternate between excessive use of spirits, and strange erratic conduct, for which the term insane is the best description.

"The intimacy of these two so-called diseases suggests that the increase of insanity is due largely to inebriety, the latter being unrecognized as a distinct disease.

"The statistics of all insane asylums recognize alcohol as a cause of insanity, varying from five to twenty per cent. A study of cases indicates a much larger number whose first sign of mental defect was the use of alcohol. After a period of excess some form of well-marked insanity appears, and the use of spirits is not regarded of interest in the history. The recognition and treatment are surrounded with great difficulties. Most cases are not treated in the early curable stage, and, on the subsidence of the acute symptoms, they are often discharged as cured. The inebriate is never recognized as requiring physical treatment until the case has reached incurable stages, and then the treatment is largely moral and empirical.

"Heredity is not recognized and the evils of both insanity and inebriety are permitted to go on unrestrained to succeeding generations.

"The mere housing of an army of incurable insane is a very small part of the prevention and cure of insanity. In like manner forcing total abstinence on inebriates by law in jails and asylums or by pledges and prayers is not curative, nor preventive. The cure of these disorders, of which insanity and inebriety are only names of general symptoms, must reach further back, and begin earlier. The increase of both, means inability and failure to recognize the causes and provide for their prevention."

Milk and Zymotic Disease.

Dr. Ernest Heart, the renowned editor of the British Medical Journal, writes extensively on this subject. The following is a summary:

"Thus far, and in very brief fashion, I have set out some of the chief points which are seen to arise on looking over my abstract of milkborne epidemics and outbreaks. The story as related is sufficiently sad and deplorable. It is one that reflects little credit on our boasted sanitary advancement. I am bound and ready to admit that much of the disease traced to the agency of milk has been caused by reason of cow conditions that have in the past been too little understood, and that to a corresponding amount the credit of our country has been saved from the charge of carelessness about disease-disseminating conditions. But when this has been said there remains still very much in the past that throws a strong light on the dark side of English sanitation in relation to milk supplies. We must not forget that in milk we have a staple article of food for many thousands, and that to children and to invalids it is a matter of great moment that our milk services shall be free from any quality likely to prove injurious to consumers of this farm produce. We already know to our cost that we are frequently, for example, called upon to purchase as milk that which is in fair proportion only the contents of our public water mains, or indeed the contents of some polluted farm-house well or adjacent ditch. Where milk as an article of diet is prescribed, in a medicinal sense it is, to say the very least, hard that it should prove to be the source of disease and even of death. To be killed by professing rem-

edies is a bitter irony of fate. But the fact remains that, treat it how we may, there is death in the milk pail and also in the milk, the one source being too often the fault of man, and the other the result of disease in the milch cow. The whole subject of milk supply is one of vast import in whatever light we look at it, and is none the less so by reason of the proven capability of milch cows to give to the milk which they secrete a quality of infectiveness which carries disease and death in its train."

Practical Notes on Thiol.

For a year past I have employed thiol in place of ichthyol in many hundred cases, and I have had ample opportunity to convince myself of its excellent qualities. As a substitute for ichthyol it seems to me to be especially welcome when used on the face, as it is odorless. Patients who could not bear the smell of ichthyol improved under thiol. In inflamed conditions the analgesic properties of thiol surprised me. It can be used in inflammations of every description. Infiltrations are resorbed without the formation of pus, making incision unnecessary. In severe carbuncles, after removal of the pus, thiol allayed inflammation when applied around the wound on the infiltrated parts and pain ceased entirely. This was experienced in all inflammatory processes where thiol was used after the removal of the pus. Lymphangitis, even phlegmones caused by panaritium, insect bite and other causes quickly disappeared under thiol treatment. Inflammation of the face caused by decayed teeth, erysipelatous infiltration of scalp and face, severe infiltration of the neck which took a serious aspect owing to œdema of the glottis gradually disappeared under constant application of thiol. In a case of general furunculosis in a child, I directed to paint thiol over every furuncle, and soon experienced a complete cure. In a case of typhilitis I ordered thiol well rubbed on the abdomen twice a day. Recovery occurred in eight to ten days. Pain subsided fifteen minutes after the first application. The best results are obtained with liquid thiol as supplied by the manufacturers, not by that prepared from powdered thiol with an addition of water. In five cases of para-metritis I have had good success with plugs soaked in thiol and distilled water, equal parts. I also ordered applications of thiol on the abdomen during the night. During the day hot linseed poultices were given. After childbirth the painful parts were painted with thiol as a prophylatic against puerperal diseases (para-perimetritis). In a severe case of para-perimetritis accompanied by great abdominal pain, high temperature and rapid pulse (130 beats) I had better results with ichthyol, as applications of thiol did not completely allay the pain, while ichthyol induced complete recovery. Cases of otitis externa I treated with thiol plugs with complete success. No other remedy has rendered me as good service against severe pains in the back after influenza. Patients experienced lasting relief by application (rubbing) of thiol over the whole vertebral column. It was interesting for me to experience that patients with emphysema accompanied by marked dyspnœa were relieved at once as soon as thiol was rubbed on the chest. Pains in the muscles of the thorax ceased, expectoration became easy, dyspnœa and catarrh improved. In pleuritis exsuditiva as well as pneumonia cruposa thiol has been of great service to me either alone or together with veratrin and potass. iodide ointment 0.1 :30—against pain in the chest. Several patients assured me that this ointment benefitted their condition more than caffein, camphor, hæmatogen, etc. I come to the conclusion therefore that we possess in thiol an agreeable substitute for ichthyol. Being odorless, cheap and efficient it will maintain its eminent position in materia medica.—*Dr. Wirz in Deutsche Med. Wochenscrift, July, 1897.*

The Prognosis of the Different Varieties of Peritonitis.

This was the title of a paper read by Dr. Abbe at the Congress of American Physicians and Surgions, May 5, 1897.

He said that it was an interesting fact, one that had been demonstrated both experimentally and clinically, that the peritonæum was capable of absorbing from three to ten times the weight of the body in an hour. The extent of the inflammatory process in the peritonæum depended somewhat upon the region involved. Thus, inflammation of the peritonæum in the vicinity of the stomach, gall bladder, or uterine appendages was much less apt to be diffuse than when it originated in the middle portion of the abdominal cavity. This had been well shown by Dr. R. F. Weir's statistics regarding operative cases of perforating ulcer of the stomach. He found that there were twenty-two recoveries out of ninety-seven cases. In recent times an equally good showing could be made in gun-shot injuries of the abdomen, provided

the operation was done early. If it was done within twelve hours, about fifty per cent. would recover; if it was delayed for about twenty-four hours, only about twenty-five per cent. would recover. Owing to the great advances made in abdominal surgery, the statistics of the different varieties of peritonitis had improved. This was well exemplified in the fact that recent statistics showed twenty-six per cent. of recoveries after peritonitis due to perforation by a typhoid ulcer. In this connection the speaker made a plea for greater promptness in referring cases of inflammation of the vermiform appendix to the operating surgeon.

Uses of Cocaine.

The editor of the Codex Medicus restricts the use of cocaine to the following conditions:

1. The use of cocaine should not be abandoned because its irrational employment has produced deleterious results.

2. Always make a thorough physical examination of the patient before injecting the drug.

3. It should not be used in cases showing organic diseases of the brain, heart, lungs, or kidneys, or in persons of neurotic diathesis.

4. Children bear it fully as well as adults.

5. The patient should always be placed in a recumbent position prior to its employment.

6. Constriction should be used whenever possible to limit the action of the drug to the desired area.

7. Use a freshly prepared solution for each case.

8. Distilled water should always be employed, to which phenic, salicylic or boric acid should be added.

9. A 2 per cent. solution has a better effect and is safer than solutions of greater strength.

10. Never inject a larger quantity than one and one-eighth grains when no restriction is used.

11. About the head, face and neck one-third of a grain should never be exceeded.

12. When constriction is possible the dose may be as large as two grains.

13. Every slight physiologic effect is not necessarily to be taken as cause for alarm.

14. Cocaine does have effect upon inflamed tissues.

15. In case alarming symptoms occur use amyl nitrite, strychnin, digitalis, ether or ammonia.

To which we will add: Always use a chemically pure product, free from isatropyl and cinnamyli-cocaine as well as other impurities, the presence or absence of which can be readily ascertained by the simple tests of the United States pharmacopeia.

The Relation of the Pulse to the Liver and Spleen.

Heitler in studying certain causes of arhythmia cordis, found that when the pulse is small the cardiac dullness is larger than when the pulse is large. (Medical Times and Hospital Gazette.)

Recently he discovered that with a small pulse and large area of cardiac dullness there is a corresponding increase in the hepatic and splenic areas of dullness. In cases of weakness during convalescence from acute infectious diseases, the physiological variations in the cardiac volume, which Heitler first observed in 1890, may be increased. The rapid development and disappearance of passive congestion of the liver has been recognized. Sometimes the edge of the liver may be felt during the evening at the umbilical level, and the next day it may have receded below the costal margin. On one occasion Heitler was demonstrating a patient with mitral stenosis and enlargement of the liver from passive congestion, and whilst he was speaking, one of his audience examined the patient, and said he was unable to find any hepatic enlargement. Heitler thereupon re-examined the patient, and discovered that the liver had already become smalle. in size, and before he had finished the examination the organ had returned to its normal dimensions, the projection in the epigastrium having likewise disappeared. The whole of this change had taken place in about five minutes between the two examinations.

Danger of Standing Water.

The editor of the Sanitarian points out the danger of standing water, that is, water that is left standing in the kitchen or bedroom, and, above all, in the sick room, over night, is liable to contamination by the absorption of impurities afloat in the air of such rooms and to be rendered wholly unfit for use. No matter that the water is cold, even to near freezing, it is so much the more liable to absorb and hold in solution the foul gases and organic particles to which it has been exposed. It is dangerous to use such water. Water should not be so left; but if it should chance so to be it should be thrown away. Fresh drawn water only

should always be used for culinary purposes, as well as for drinking, whenever practicable. Moreover, faucets over sinks and wash basins are always more or less liable to contamination, hence the first water that flows on opening them after they have been left all night without use, should always be let flow away—it is dangerous to drink and unfit for the tea-kettle, or for cooking water; even boiled disease germs are unwholesome.

The Wages of Uncleanliness.

The terrible plague raging in India is claiming victims by the thousands. In America the people shudder at the thought of yellow fever and small-pox, which is nothing in comparison to India's terrible disease. Remember, the prime cause of this plague is filth, unsanitary conditions. People who fail to keep themselves and surroundings clean always pay the penalty in pain and death. Promptly abate everything of a disease-breeding nature, and you will not only prevent sickness, but also death.

The bubonic plague, which is so terribly violent in Bombay, India, is regarded as the most destructive of all known epidemics. The percentage of fatalities is rarely under 60 per cent., and often 90 per cent. of those attacked die. The symptoms generally resemble those of other severe fevers. Great weakness and mental disturbances occur,and are followed by coma and death. During the early stages of ths disease dark lumps, or buboes, appear on the skin, caused by subcutaneous hemorrhages, and there are glandular swellings in various parts of the body. In the latter stages of the disease carbuncles are developed. No specific treatment for the plague is known.

How a Cold Water Bath Should be Taken.

Dr. Cyrus Edson says that a cold bath should not be used when a person is tired or exhausted, as the reaction on which depends its beneficial effect does not follow when the system is tired. The result of a cold bath at such a time is likely to be internal congestion.

It does not follow, however, that a perspiring person should not bathe until cooled off. As a matter of fact, if the person is not exhausted, the fact that the pores are open is rather advantageous than otherwise, as the reaction is enhanced and will probably follow more energetically. A bath should never be taken within two hours of a hearty meal. The first effect of immersion in warm or cold water is to seriously derange the digestive process, if that is progressing at the time, and, by a physiological effect that naturally follows, to unbalance or derange the whole nervous system. The result of this is extremely dangerous to the bather. There are numerous instances of severe illness and even of death caused by bathing while the stomach was full.

Tobacco and the Eyesight.

Prof. Craddock says that tobacco has a bad effect upon the sight, and a distinct disease of the eye is attributed to its immoderate use. Many cases in which complete loss of sight has occurred, and which were formerly regarded as hopeless, are now known to be curable by making the patient abstain from tobacco. These patients almost invariably have color blindness, taking red to be brown or black, and green to be light blue or orange. In nearly every case, the pupils are much contracted, in some cases to such an extent that the patient is unable to move about without assistance. One such man admitted that he had usually smoked from twenty to thirty cigars a day. He consented to give up smoking altogether, and his sight was fully restored in three and a half months. It has been found that chewing is much worse than smoking in its effects upon the eyesight, probably for the simple reason that more of the poison is thereby absorbed. The condition found in the eye in the early stages is that of extreme congestion only; but this, unless remedied at once, leads to gradually increasing disease of the optic nerve, and then, of course, blindness is absolute and beyond remedy. It is, therefore evident that, to be of any value the treatment of disease of the eye due to exeessive smoking must be immediate, or it will probably be useless.

The Tongue in Facial Paralysis.

Schultz ecalls attention to the fact that in peripheral facial paralysis the base of the tongue on the affected side stands at a lower level than on the other side, and that this may be noticed when the tongue is protruded, or when it is at rest in the mouth. The author (British Medical Journal) relates two illustrative cases, one of these was secondary to ear disease and the other followed upon exposure to a draught. In the first csse, with the disappearance of the paralysis the tongue assumed its normal position. This position of the tongue was not due to any asymmetry. The cause of

it is not very obvious; most probably it is due to paralysis of the stylo-hyoid muscles and of the hinder part of the m. biventer, both of which muscles are supplied from the facial nerve. No depression of the hyoid bone could be made out in the author's cases. Electrical stimulation, especially of the trunk of the facial, does not produce any raising of the base of the tongue. In central facial paralysis Schultze has not yet observed this change in the tongue.

Vaginal Examination of the Unmarried.

The Philadelphia Polyclinic editorially deals with this subject as follows: In supposed pelvic disease in young unmarried women a pelvic examination is too often proposed and carried out. It should be remembered in this connection that the large majority of diseases peculiar to women are sequences of coition and its results, either pregnancy or specific infection,—neoplasms are, of course, excepted; consequently it can usually be predicted that a pelvic examinatiion will result negatively and is consequently unnecessary. Baldy finds this to be true in the majority of cases, and urges the advisability of paying more attention to the patient's general health and antecedents. This is the more important, as a hysteric or neurotic girl's attention being once pointedly directed to her pelvis as the seat of her trouble, she often becomes a chronic pelvic sufferer. As is the case with opium eaters and chronic alcoholics, the medical profession is also responsible for making a large class of pelvic sufferers.

The Hindu Lying-in Chamber.

The mortality in childbed among Hindu women is notoriously high, a circumstance which is no doubt largely due to the very early age at which they become mothers. A still more potent cause, however, is to be found in the shocking, and apparently deliberate barbarity with which they are treated during the puerperium. The lying-in chamber of a Hindu family is ordinarily a lttle, damp, ill-ventilated hut or room in some remote corner of the courtyard or compound. In this the expectant mother is placed, and there she remains from eleven to thirty-one days, during which, according to Brahminical law she is looked upon as unclean. There is only one small inlet to this apartment and the door is carefully closed to exclude those evil spirits, light and air. In order probably to purify the unfortunate woman by heat woodfires are kept burning in the room both night and day. The smoke has to find its way to the outer air as best it can through any chinks there may happen to be in the roof or walls, which are usually made of bamboo with a thatching of mats or straw. With the view of more effectually exorcising the unclean spirit a powder composed of peppercorns or ginger is given to the patient during the first few days; this preparation is administered either in the form of a paste or dissolved in boiling water as a tisane. It is not surprising to learn that the result of this elaborately perverse therapeusis is that something like 40 per cent. of the women subjected to it die of puerperal fever and tetanus within the first fortnight after delivery.

Prognosis in Pulmonary Tuberculosis.

Dr. E. B. Borland in discussing this subject at the American Medical Association said: Evidence has been accumulating which shows that tuberculosis is not only a universal, but the universal disease. Post-mortem examinations made in recent years point to the probability that 25 per cent. is much too low an estimate of the total number of infections. Schlenker made one hundred consecutive post-mortem examinations of children and adults for this purpose and found 66 per cent. tuberculous. Turning to pulmonary tuberculosis, Babes found lesions of the bronchial gland in more than one-half of his post-mortems on children. Long before Koch discovered the tubercle bacillus Louis laid down the rule that if tuberculosis was found in any part of the body it would be found in the lungs.

It will be a moderate estimate to say that nearly 50 per cent. of the human race are infected at some period of life with tuberculosis. Large as is the death-rate the tubercle bacillus does not seem to be a markedly virulent germ. Without the addition of septic germs pulmonary tuberculosis would not be the fatal disease it is today. The vile habit which the American people have of expectorating on floors and sidewalks has much to do with the transmission of septic germs, as well as tubercle bacilli, to the lungs.

Nature can wall up tubercle bacilli with bodies of leucocytes and connective tissue for life, but cannot imprison septic germs for any great length of time. Tuberculosis uncomplicated with sepsis may be considered a curable disease in the sense that it may be held in abeyance—that is, kept in

a latent condition, for a lifetime, providing the vital resistance of the individual is kept up to the normal standard. Nature has been known to completely eradicate it in a limited number of cases. The scientific physician will endeavor to imitate nature so far as he can interpret her methods.

Can tuberculosis be cured to all intents in its latent stage? It has been demonstrated that two-thirds of all infectious diseases either disappear or remain quiescent during an average life. If nature can accomplish so much under the reign of empirical medicine, what will she be able to do when the physician concentrates all his energy on building up and maintaining the vital resistance of cell life and keeping septic germs away from the latent life? The author has nothing to offer on the curability of the ulcerative stage—that is to say, the well developed mixed infection. Perhaps less than three per cent. throw off both infections and fully recover. In probably 20 per cent. the disease becomes quiescent, and remains so for a number of years, and is then lighted up again. The average life of the remaining 77 per cent. may be placed at two years. The posting and enforcing the placard, "Gentlemen will not, others, who do not class themselves under the title, must not expectorate on floors and sidewalks," would do more to improve the prognosis of either stage of pulmonary tuberculosis than all the toxine or antitoxine treatment of the last decade.

Etiology of Asthma.

Dr. Kuss maintains that, among the various causes of true asthmatic dyspnœa, the principal is a defective evaporation caused by a want of sufficient fluid in the epithelial cells of the pulmonary vesicles. This insufficiency of fluid must be attributed to the reflex affection, from various causes, of the vasomotor nerves governing the nutrition of the cells, and produces the same effect as a sudden and considerable reduction in area of the active pulmonary surface. The convulsive action of the respiratory muscles might easily be a consequence of this dyspnœic condition. In the treatment of asthma (1) increased activity must be given to the secretory powers of the epithelial cells by acting on the secretory (vaso-motor) nerves; (2) the determining cause of the harmful reflexes must be obviated by various recognized methods; (3) the physiological and anatomical soundness of the alveolar walls should be maintained by appropriate nutrition.

Changes in Ovaries in Old Age.

Otroshkevitch has investigated the changes in the ovaries of old women, and arrived at the following conclusions: 1. Diminution of volume of ovaries advances wtth age and depends upon the predomination of the fibres of connective tissue. 2. The disappearance of epithelium covering the surface of the ovaries must be regarded as one of the constant symptoms of changes in old ovaries. 3. The absence of ripe ovules and degeneration represent the most important and characteristic changes of old ovaries. 4. Hyaloid degeneration of arteries gradually increases with age, and in very old age we meet with very high degrees of this degeneration. 5. Fatty degeneration of the cells is moderate, and seems to depend on the feeble nutrition of the ovaries. 6. Direct connection between degeneration of the vessels and cessation of the functions of the ovaries does not seem to exist, as ovaries cease their functions when the quantity of degenerated vessels is very limited, its nutrition being, therefore, but little changed. The principal part in this complicated process is probably played by the nervous system.

Uncontrollable Vomiting of Pregnancy. *

Dorff has reported an interesting case in which the persistent vomiting was traceable to a hysterical origin. A woman 22 years old, of nervous parentage, became pregnant, and in the fifth week nausea and vomiting made their appearance. She had difficulty in walking, and, an examination showing retrodisplacement of the uterus, a pessary was introduced. General improvement followed. Some time after this, paralysis of both hip joints, accompanied by loss of sensation, appeared without premonition; globus hystericus present, also very distressing, dry, spasmodic cough, which, in the absence of all physical symptoms, was believed to be of purely nervous origin. Three weeks later spontaneous disappearance of hip-joint paralysis, followed by paralysis of knee-joints and feet. In the fourth month patient's condition very alarming: no food retained; temperature lower; pulse rapid and small; urine scanty, free from sugar and albumen. Hypnotism without result. The induction of premature labor was considered to be indicated. For this purpose a laminaria tent was introduced. Pains did not occur, but all bad symptoms improved and the patient was able to carry her child to full term.

* American Journal of Obstetrics.

The Value of Apioline in Neurotic Dysmenorrhœa.†

Dysmenorrhœa is one of the most frequent complaints the general practitioner is called upon to treat. That it is one most obscure in etiology, as well as one of the most difficult to permanently relieve, all physicians will admit.

Most authorities divide dysmenorrhœa into the neuralgic, the obstructive, the congestive or inflammatory, and the membranous forms. The frequency of these varities is in the order named. In other words, the most frequently met is the neuralgic form, and the least frequent is the membranous.

While one who has had experience can readily determine the character of the case by the character of the symptoms, and although we do occasionally find these typical varieties, it is doubtful if any case continues one of any of these (distinct) varieties for a long period of time. Thus, a neuralgic dysmenorrhœa does not long remain purely such. It is impossible to suffer great pain during the function of menstruation continuously, month after month, and year after year, without structural changes in the endometrium resulting. Neurotic dysmenorrhœa in time becomes congestive, and, finally, inflammatory dysmenorrhœa.

In a certain sense, every dysmenorrhœa is mechanical. Neuralgic dysmenorrhœa is certainly mechanical when spasmodic; for instance, when there is spasmodic action of the fibres of the cervix, analogous to the spasmodic action of the sphincter ani in fissure in the rectum. There is a mechanical obstruction in dysmenorrhœa when the cause was originally a flexion or displacement. Sooner or later, the neurotic element enters into all cases of dysmenorrhœa. Of course, obstruction is one of the chief underlying factors in causing pain in some cases of dysmenorrhœa. It is a well-known fact that savage women suffer much less during labor than their civilized sisters, possibly because a higher development of the nervous system is incident to civilization. It seems natural to suppose that this high development of the nervous system makes menstruation more painful; or, in other words, that the pain, at least in part, is nervous or neuralgic. Dysmenorrhœa in young women is often caused by improper mode of life, and for the relief of such it is not the gynecologist, but the general practitioner, who should be consulted. The latter by proper advice and judicious medication can and will usually give them relief without the examination, which, in unmarried women, when unnecessary, is little less than a crime.

Some recent authorities deny the existence of a pure neuralgic dysmenorrhœa, attributing all cases of dysmenorrhœa to infection and arrested development. I think, however, that most practitioners believe there is such a thing as neuralgic dysmenorrhœa. I regard it as the most frequent form of dysmenorrhœa, coming on at the very beginning of menstruation and, it may be, lasting until the end of menstrual life; and it is the most troublesome form to treat in many instances. One reason for believing in its existence is the conduct of cases, and the manifestation of symptoms. Some of these cases begin at the very inception of menstruation; some not until months afterward; some not until after married life; and some not until after parturition.

Some, when they have begun, or later on, stop for one or several months or a few years, and then for some cause return again. There is great irregularity regarding time, duration and the position of the pain in these cases. Not a few of these cases suffer irregularity in quantity at different times, and not a few cases suffer irregularity in position at different times.

In the treatment of dysmenorrheal cases, where there is no tangible pelvic lesion demanding strictly local attention, or operative interference, I have of late come to rely on a single remedy; apioline, the active principle of *petroselinum sativum*, introduced to the profession by Chapoteaut. The following cases are of the neurotic variety of dysmenorrhœa, and clearly demonstrate the value of the drug as a therapeutic agent.

Case I.—Miss F., aged 20, anemic and poorly nourished. For two years she had suffered greatly from painful and scanty menstruation. At times the pain was so severe that the hypodermatic use of morphia was resorted to. An iron tonic was prescribed; also, apioline at the menstrual periods, beginning three days before the flow was due. In three months the patient was much improved in general health, and her menstruation was normal.

Case II.—Mrs. R., aged 34, married ten years, three children, youngest two and a half years old. Had had painful and scanty menstruation off and on nearly four years. When I first saw her she had had four painful periods in succession. Apioline was ordered (one capsule three times a day) during the flow, beginning as usual two or three days in advance. The effect was immediate, pain being slight, and the flow more copious. The second month there

†D. S. Maddox in Medical and Surgical Reporter.

was no pain, and flow was normal in quantity.

Case III.—Mrs. B., aged 27, married five years, one child two years old. Previous to marriage had suffered from painful menstruation, but after marriage the attacks had subsided, and only recurred after the birth of her child. The pain experienced was of a severe character, necessitating confinement to bed and opiates. She was put on apioline (one capsule three times a day,) beginning three days before the period. This remedy continued for three months, after which menstruation was normal.

A Case of Typhoid Fever Without Ulceration of the Intestine.

From time to time cases have been met with which during life had been diagnosed as typhoid fever; but when, post mortem, no intestinal ulceration was discovered the diagnosis was doubted. Dr. Sidney Phillips has recorded two cases in which, though Peyer's patches were swollen, yet there was no ulceration even as late as the twenty-first or twenty-fourth days respectively of the disease. (London Lancet). A similar case is reported in *La Semaine Medicale*. The following case, though resembling the cases already quoted, differs from them in several important particulars. At the necropsy no sign of any disease of Peyer's patches could be seen; if this case had occurred only a few years ago most physicians would have considered the diagnosis of typhoid fever as very doubtful; but in addition to the typical character of the clinical symptoms, the serum test during life and the bacteriological observations made after the death of the patient render the diagnosis absolutely certain. For the notes of the case we are indebted to Mr. A. Ferguson MacCallan.

A boy, aged three years, was admitted to the hospital under the care of Dr. Cheadle on Nov. 8th, 1896, with a history of diarrhœa, vomiting, and debility. A brother and a sister of the patient had been for some time in the children's ward, suffering from typhoid fever. The date of the child's admission was probably the tenth day after the onset of the symptoms. His appearance was heavy and apathetic, the lips being dry, cracked, and bleeding. There were on the abdomen three rose-coloured papules, which faded on pressure, and there were four or five on the back. The abdomen was swollen and tympanitic, and the liver was enlarged, but the spleen did not appear to be increased in size. Previously the patient had been healthy, and no important family history could be elicited from the sibilant rhonchi and mucous rales. In the left axilla the breathing was bronchial in character. The deep cardiac dulness was a little increased to the left, and the first sound at the apex was weakened. On the 24th the patient was in a comatose condition and there was slight dyspnœa. Curds were present in the motions. The patient vomited. On the 30th the first sound at mother. The heart showed signs of slight enfeeblement. On examining the lungs no dulness was found, but the air entry was poor, and there were a few moist sounds and musical rhonchi heard on auscultating the back. The urine was normal. There was no marked diarrhœa, the motion being yellowish-brown in colour and of a soapy consistency. On Nov. 10th subsultus tendinum and marked carphology were observed. On the 12th the catarrhal sounds over the chest were slightly louder. Profuse diarrhœa began. On the 18th epistaxis and vomiting occurred. The abdomen was less distended and moved freely with respiration. On the 23rd the breath sounds heard over the chest were obscured by the apex of the heart was reduplicated and the second sound was accentuated; this gave a cantering rhythm to the beats. On Dec. 1st the patient was sick after food whenever given. The pulse was feeble and irregular, and he expired in the afternoon. The treatment adopted by Dr. Cheadle was directed to sustain the failing heart by stimulants and cardiac tonics; these included brandy, tincture of digitalis, and aromatic spirits of ammonia. The lung condition was treated with potassium citrate, and vinum ipecacuanhæ; the latter drug was, however, abandoned after a time as being a cardiac depressant. The diet consisted of meat teas and milk, which latterly was peptonised. On two occasions when the diarrhœa was excessive enemata of starch and opium was ordered. The case appeared to be one of profound typhoid poisoning, resulting in death from heart failure. On the twenty-first day of the disease, Nov. 19th, on applying the serum test, Mr. MacCallan found that there were loss of motility of most of the bacilli and marked clump formation. The typhoid bacilius was separated from the urine on the twenty-sixth day of the disease by Parietti's method. On the thirty-second day he suspended in 5 c.c. of water part of a two-day-old stock culture of the bacillus, and to this were added two drops of blood from the patient. The fluid, previously cloudy, became clear after some hours, the bacilli having formed clumps and settled to the bottom of the tube as a flocculent, uneven mass.

At the post-mortem examination no ul-

ceration of the intestine was visible, and Peyer's patches appeared to be normal. There was a slight indentation of the mucous membrane close to the ileo-cæcal value, but this was probably accidental, since microscopical sections showed nothing abnormal. The colon was normal. The spleen was normal in size and appearance; it was opened aseptically, and cultivations on agar, gelatin, and potato were made. The culture tubes after incubation showed typical colpnies of the typhoid bacillus. Mr. MacCallan examined microscopically for typhoid bacilli thirty or forty sections of the spleen, but was unable to recognise any. This was not surprising, as Gaffky says that it is sometimes necessary to examine 200 stained microscopical sections of the spleen in cases of typhoid fever before groups of bacilli can be recognised. The mesenteric glands and liver were enlarged. Before the heart was opened blood was collected from the right auricle in Pasteur pipettes and the serum test was carried out with a culture of bacilli which had been separated from the patient's urine. Loss of motility in most of the bacilli and clump formation were observed. The heart showed a slight dilatation of the left ventricle. The bronchi contained muco-pus, and there was some lobular collapse of the lung tissue.

Intracranial Aneurism Treated by Ligature of the Common Carotid.

Dr. Roderick Maclaren, in the British Medical Journal reports the case of a patient, domestic servant, who was seen April 29, 1894, and who reported that about seven weeks before she had been suddenly seized with pain on the left side of the head and in the left eye. At the same time she was aware of a rushing noise on the same side of the head. Very soon afterwards the left eye felt weak and watery, and the eyelids swelled.

On examination the sollowing condition was ascertained: The left eyeball was pushed forward, both upper and lower eyelids on the left side were swollen and edematous. There was congestion of the conjunctival vessels. There was almost complete paralysis of the external rectus of the left eye. The pupil was active; vision normal. The other movements of the eye were right. The fundus was healthy and the disc normal. On auscultating the cranium a loud systolic bruit was heard. It was audible all over the head and a short distance down the back of the neck, but was loudest over the left orbit and temple. When the left common carotid was compressed the murmur entirely disappeared; it was not influenced by pressure on the right common carotid. Her arteries everywhere else were extremely atheromatous. The heart was large and the apex-beat two inches to the left of the median line. There was a quantity of albumin in the urine. The inference from this combination of symptoms was that she had an aneurism of the internal carotid, pressing on the cavernous sinus, the sixth nerve, and the auditory nerve.

On May 8 the common carotid was tied. Improvement began at once, the bruit, of course, stopped immediately. Before night the edema of the eyelids was lessened. On the following day it was noticed that the eye was less prominent and the hearing was greatly improved. Two days after the operation the proptosis had disappeared; the edema and deafness were gone, and there was improvement in power of the external rectus. She was discharged from the hospital seven weeks after operation. The movements of the eye were then perfect; her vessels decidedly softer. The apex-beat was normal and there was no albumin in the urine. After the operation she had a farinaceous diet and 10 grn. of potassium iodide three times daily.

Multiple Neuritis Following Influenza.

Dr. H. B. Allyn in the Journal of the American Medical Association says that the great majority of these cases are instances of peripheral neuritis; in a few the cranial nerves are also involved, and in a few also the spinal cord is at the same time affected. The disease, he thinks, is an intoxication of the nerve trunks, and this intoxication may be sufficient to produce rapid destruction of the nerve fibres or only enough to cause more or less pain—an irritative instead of a paralytic toxæmia. The salicylates, he says, are useful in these cases, probably because they have the power of promoting the elimination of certain toxic agents. Dr. Allyn cites a number of cases from which he draws the following conclusions:

1. Influenza, like other infectious diseases, may be followed by neuritis and multiple neuritis.

2. One sex does not seem to be more liable to multiple neuritis than the other.

3. It occurs most frequently between the twenty-fifth and forty-fifth years, and appears during convalescence in a few days or two or three weeks after the influenza has subsided.

4. It may present sensory, motor, vaso-

motor, or trophic symptoms, or all combined, but sensory and vasomotor symptoms are more prominent than in diphtheritic and some other causes of multiple neuritis.

5. The great majority of the patients recover as regards restoration of function and power as well as regards life. Five of the patients in his thirty-six cases referred to in his paper died. In one of Bruns's cases the symptoms resembled those of Landry's paralysis; in the other there was paralysis of the tongue and throat. In Eisenlohr's fatal cases there was general motor paralysis with intense hyperæsthesia of the skin. In Ferguson's case the neuritis was visceral, and in Leyden's fatal case there was coincident disease of the cord.

6. Recovery does not usually take place under four weeks and may be delayed for months.

7. The treatment should consist, first, in absolute rest in bed. Anodynes must be given in sufficient dose to relieve pain, when that is a prominent symptom. Morphine hypodermically may be necessary, but may often be replaced with advantage by codeine. The antipyretic anodynes are insufficient in any safe dose if the patient has pains for many days. The salicylate of cinchonidine is distinctly valuable, especially when the pain is not of the greatest intensity. At a later stage potassium iodide and the bichloride of mercury in small doses are helpful. When the pain is in an extremity, firm pressure with a flannel bandage gives great comfort. Blisters over the painful nerve trunks, when they are superficial, are also valuable in relieving pain.

Close watch must be kept on the action of the heart and the character of the breathing. In most of the fatal cases death is due to paralysis of the diaphragm. The closest attention must be given throughout the course of the case to the nutrition of the patient and to the condition of the skin, especially over portions of the body where pressure occurs. So far as possible, the stomach should be reserved for food. Medicine in these cases acts better when given hypodermically, and the stomach is not so likely to be deranged. This caution applies especially to the giving of anodynes.

8. The doctor thinks diphtheria as a cause can be excluded in the cases which he has seen, both from the absence of any clinical evidence of it in the patient or his surroundings and from the fact that diphtheritic neuritis is almost purely motor, yet he can not exclude the poison concerned in the production of follicular amygdalitis—infectious amygdalitis—for sometimes this is associated with influenza, and it may produce as much headache, backache, and prostration as usually characterize the onset of influenza itself.

The Specific Fevers and their Complications.

Dr. Edward Mackey (British Medical Journal) has recorded two cases of measles with fatal complications of a somewhat unusual type. The first patient, a boy of ten years, with a fully-developed measles rash, suddenly became unconscious, and a few hours later he was found to be comatose, with stertorous breathing, insensible corneæ, dilated pupils, retracted head, spastic rigidity of limbs, and contracture of the fingers and toes. He died the same day, the temperature rising to 105 deg. Fahr. The necropsy revealed signs of intense cerebral hyperæmia without any definite cause. The writer suggests that toxins might have been circulating in the blood and overwhelmed the nerve centres. His second case was an infant of fifteen months, in whom the onset of measles was marked by a slight general convulsion. Ten days later œdema appeared in the right foot and left hand, which increased rapidly in the latter, with echymoses about the elbow, and vesicles on the wrist. The diagnosis was septic phlebitis with thrombosis, and the case terminated fatally a few days later.

A Contribution to the Study of Bleeding Stigmata.

Dr. J. N. Hyde, of Chicago, (American Dermatalogical Association) reported the case of an adult male subject who suffered from hemorrhages from the surface of the skin apparently spontaneous in origin. Some of these bleedings had lasted for six months at a time. Eventually there was a shortage of fifty-five per cent. of hemoglobin and nearly sixty-five per cent. of erythrocytes. The author reviewed the literature collected under the titles, bleeding or bloody stagmata, bloody sweat, hematidrosis, Hautblutungen, hysterical stigmata, and ecstasy; concluding as follows: "It is clear that at times spontaneous hemorrhage occurs from one or many points of the skin simultaneously or successively, either as a result of morbid changes in the circulating fluid itself, or as a consequence of disease of other organs, in particular the nervous centers, the spleen, the liver, and the kidneys. One may look with tolerable confidence in most of these cases, first, for an oozing of blood from many points at one

time rather than from a single at one time; second, for an unquestioned evidence of a morbid state elsewhere than in the skin. Suspicion attaches to a second group of cases by reason of the fact that the effusion of blood from the surface of the integument seems to have been shared with spontaneous gangrene in the devices of the impostor. In analyzing the phenomena exhibited in this class of subjects the possibility is to be set aside, first, of the staining of the physiological secretions by foreign matters or by micro-organisms existing upon the surface; second, of the substitution for human blood of that of one of the lower animals. When human blood is actually effused from the skin of a subject who has been instrumental in producing the result, not only are all the sites of the hemorrhage within easy accessibility of the hands of the patient, but there are mental and nervous changes which require recognition. The mental states of this class of subjects often defy analysis; among the nervous symptoms may be named disorders of the special senses, particularly of sight, heering, olfaction, and gustation, and the occurrence of anesthesia and of hyperesthesia."

The Nature of the Xanthomata.

Dr. S. Politzer, at the recent meeting of the American Dermatological Association, read a paper with this title.

The peculiar yellow plaques and nodules in the skin known as xanthoma have been the subject of extensive studies on the part of pathologists and dermatologists ever since they were first described by Addison and Gull in 1850. The greatest diversity of opinion exists as to their nature. This is due probably in part to the fact that different authors have examined different stages of the disease, and in part to the fact that the different forms of xanthoma have been assumed to be merely different clinical manifestations of the same process. The author's histological studies are based on thirteen cases—five of them cases of xanthoma planum palpebrarum, four of xanthoma tuberosum, and four of xanthoma diabeticorum. The clinical grounds for separating xanthoma of the eyelids from multiple xanthoma are as follows: The nodules of xanthoma multiplex are firm, round, elevated papules; the patches of eyelid xanthoma are soft plaques in the level of the skin. Eyelid xanthoma persists through life; multiple xanthoma sooner or later undergoes involution. Eyelid xanthoma is quite common; multiple xanthoma is extremely rare. If the eyelids were in this preponderating degree the seat of predilection for a common xanthoma, we should expect to find the eyelids affected in every case of multiple xanthoma; but as a matter of fact the two forms are rarely associated in the same individual. With the extensive material at his command the author has been able to show that common eyelid xanthoma is not a new growth, but is due to a degeneration of pre-existing, embryonally misplaced muscle tissue. The so-called xanthoma cell is a fragmented muscle fiber in a state of granulo-fatty degeneration.

Changes in Milk by Boiling.

Kerr, in the British Medical Journal, says: There are reasons for supposing that when fresh milk is ingested the living cells are at once absorbed without any process of digestion, and enter the blood-stream and are utilized in building up the tissues. The casein of the milk is digested in the usual way of other albuminoids by the gastric juice and absorbed as peptone. There is also absorption of serum albumen by osmosis.

The chemical result of boiling milk is to kill all the living cells and to coagulate all the albuminoid constituents. Milk after boiling is thicker than it was before. The physiological results are that all the constituents of the milk must be digested before it can be absorbed into the system; therefore there is a distinct loss of utility in the milk, because the living cells of fresh milk do not enter into the circulation direct as living protoplasm, and build up the tissues direct, as they would do in fresh unboiled milk.

In practice it has been noticed that there is a very distinctly appreciable lowered vitality in infants which are fed on boiled milk. The process of absorption is more delayed, and the quantity of milk required is distinctly larger for the same amount of growth and nourishment of the child than is the case when fresh milk is used.

Sir Astley Cooper's Unguentine.

It would really seem that the Norwich Pharmacal Company has given to the profession in unguentine an article of unusual merit. So prolific is this age in the production of new pharmaceutical compounds that the physician is compelled in self-protection to regard all at least with incredulity until he has become convinced that some particular article is really worthy of recognition.

One of our earliest experiences with un-

guentine was in the case of a member of our own family, an old lady of 78, who had been operated upon for strangulated hernia. The wound was dressed with unguentine—and it was most edifying to see how beautifully clean and pure it kept, and how rapidly it healed. We have now used unguentine in a very large number of cases and we must confess to a feeling of surprise at the wide range of its therapeutic applicability. In many cases of wounds threatening blood-poisoning we have used it with the happiest results.

In various skin eruptions, in hemorrhoids, in ulcers, in a word wherever a local application is indicated we have had most gratifying results from the use of unguentine.

It must not be forgotten that this preparation was originally devised by Sir Astley Cooper, who, however, it is safe to assume, little realized how varied would become its applicability.

We have not been paid for writing this little notice nor do we expect to be; it expresses our honest convictions and it has been penned in accord with the spirit of the code that admonishes us to help one another.

We have found unguentine to be an extremely valuable article for local use, and we honestly and confidently commend it to our readers. Try it; you will like it.—*The Daily Lancet.*

The Diagnosis and Management of Syphilitic Brain Disease.

In a discussion before the New York Academy of Medicine, Dr. E. C. Spitzka considered the diagnosis between genuine melancholia, and a somewhat similar condition observed in the initial period of syphilitic dementia. (Universal Medical Journal). In true melancholia there is mental depression uninfluenced by surroundings; in the syphilitic disease the patient is depressed, because he is unable to attend to his business, and suspects that his friends realize this. In the former insomnia is present, while in the initial period of damentia syphilitica the patient sleeps through the night, and often also during the day. The true melancholia is universally neglectful of his dress; the other is very particular about certain parts of his dress and negligent about other portions. In true melancholia the patient is seclusive, while the syphilitic is irritable and his symptoms show great variations from day to day, finally drifting into a condition in which slight but characteristic changes in the medulla oblongata are found. Dr. Spitzka thought the differential diagnosis of great importance, because proper treatment in the early stages of dementia syphilitica might bring about complete recovery. In his experience, the common error had been that of too exclusive reliance on the iodides. His own initial treatment was always with mercury, preferably by inunction. The cases of syphilitic dementia, he says, are usually over 45 years of age, and suffer from renal insufficiency. The syphilitics often contemplate suicide, but only actually commit it on the impulse, and without premeditation. Although gastric irritation is quickly produced in ordinary persons by large doses of iodide, in the cases under discussion very large quantities of the iodide are not only tolerated, but often seem to act like a charm.

Immunity against Typhoid Fever in Man.

Pfeiffer and Kolle (Medical Science) claim from the results of their experimental work on guinea-pigs and on human beings that they have obtained evidence to demonstrate that the latter can be protected against typhoid fever by inoculation of small doses of dead typhoid bacilli. It has been discovered that persons inoculated with increasing doses of living or dead cholera bacilli were rendered immune against cholera; hence their conclusion for a similar procedure with the typhoid bacillus. A typhoid agar culture was made in bouillon; the bacilli were killed by keeping the suspension in an incubator for several hours at a temperature of 56 deg. C., and 1 c.c. was injected subcutaneously into the back of two individuals.

Typhoid bacilli failed to clump or agglutinate with the serum secured before inoculation, while marked clumping was observed in the serum obtained after the inoculation. It was found that by a single inoculation with dead typhoid bacilli an antitoxic substance is produced, which has the same property of causing clumping of typhoid bacilli and rendering them immotile that the antitoxic substance in the serum of a patient ill with or convalescent from typhoid fever has.

A line of steamers on the great lakes has announced that it will give a prize of $250 in gold for every baby born on one of its vessels this season, $500 for twins and $1,000 for triplets.

Investigators with the Roentgen ray, in turning it upon the diaphragm during an attack of asthma, say that the right half stops working, leaving the left half to do all the work.

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IMPERIAL GRANUM SEEMS TO HOLD FIRST PLACE IN THE ESTIMATION OF MEDICAL OBSERVERS.—*"The Feeding of Infants," in the New York Medical Record.*

IT CONTAINS NO TRACE OF ANY IMPURITY.—*The Lancet, London, England.*

A valuable aid to the physician in the treatment of all the graver forms of gastric and enteric diseases.—*The Prescription.*

As a food for patients recovering from shock attending surgical operations IMPERIAL GRANUM stands pre-eminent.—*The International Journal of Surgery, New York.*

Not only palatable, but very easily assimilated.—*The Trained Nurse, New York.*

IMPERIAL GRANUM is acceptable to the palate and also to the most delicate stomach at all periods of life.—*Annual of the Universal Medical Sciences, Philadelphia, Penna.*

Endorsed by the best medical authorities in this country.—*North American Practitioner, Chicago, Ills.*

It has acquired a high reputation, and is adapted to children as well as adults—in fact, we have used it successfully with children from birth.—*The Post Graduate Journal.*

It has steadily won its way, step by step until it now stands unchallenged at the head of all food preparations.—*The Medical Council, Philadelphia, Pa.*

Especially valuable in fevers, and often the only food the stomach will tolerate in many gastric and enteric diseases.—*Dominion Medical Monthly, Toronto.*

There is no better prepared food.—*The Medical Mirror, St. Louis, Mo.*

It enjoys so widespread an endorsement from the medical profession that its reputation is beyond dispute.—*American Medico-Surgical Bulletin, New York.*

We have used it with the best possible results in several cases of summer diarrhoeas in children.—*The Western Medical Journal, Fort Scott, Kansas.*

It is peculiarly adapted to most of the diseases of infancy and childhood that have originated in the use of improper food.—*The St. Louis Medical Era.*

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Mode of Infection in Malarial Fevers.

Laveran, the claims of whose *Plasmodium* to be considered the specific microbe of malaria have almost entirely superseded those of the bacillus of Tommasi-Crudeli in the opinion of the highest authorities, including even the original workers in this field in Italy, has recently attacked the time-honoured beliefs, as to the means by which the *materies* or *causa morbi* gains access to the human body. He rejects aerial infection as improbable, considers drinking water a possible vehicle, though not proven, and is inclined to the view that mosquitoes are the efficient agent in this as in Texas fever, and in the case of *Filaria sanguinis*.

He argues that all the usual precautionary measures, as avoidence of night air, sleeping in upper storeys, the lighting of smoky fires by parties compelled to camp out, and even the drainage and drying of the soil, are one and all, though unconsciously, calculated to avert the attacks of gnats and mosquitoes. This seems in the highest degree probable; but it is, we think, impossible to deny the danger of drinking marsh waters in malarious districts without previous boiling, for it is but reasonable to suppose that the plasmodium has its native habitat in the water and damp soil, whence it enters the bodies of gnats, and is by them transplanted into those of man, most animals being protected against the bites of mosquitoes by their hairy or wooly coats and thicker skins. We may, in passing, express our belief that the part played by insects, especially the common fly, in the conveyance of infection is not appreciated as it should be, and that many cases of erysipelas, small-pox, measles, etc., the origin of which cannot otherwise be accounted for, might find in this an early explanation.

Picric Acid in Burns.

This was the title of a paper read July 7, 1897, at the Edinburgh Medico-Chirurgical Society by Dr. Miles (British Medical Journal, July 17, 1897). He said: Whether in superficial or in more extensive and serious burns the objects aimed at in a first dressing were: 1, to relieve pain; 2, to prevent sepsis; 3, to allay inflammation; 4, to prevent the spread of inflammation to devitalised tissue; 5, to promote rapid separation of sloughs by dry gangrene; 6, to encourage healthy granulations. The method adopted was to cleanse the parts with weak carbolic lotion, to prick the blisters, to apply surgical lint soaked in a saturated solution of picric acid (picric acid ʒjss; absolute alcohol ʒiij; water to ʒxl), wool, and a many tailed bandage. The subsequent dressing was guided by the discharge, temperature, etc., and the same dressing was used with the precaution of never tearing away adherent lint. Chloroform was given during the dressing, especially in children. In many cases it was well to dress twice a week. Mr. Miles had now treated 100 cases in Leith Hospital by this method. The advantages of the method were: 1, simplicity; 2 painlessness; 3, asepsis; 4, small amount of discharge; 5, infrequent dressings; 6, the astringent action of the picric acid in preventing inflammation; 7, its effect in promoting the growth of epithelium; 8, rapid separation of sloughs; 9, absence of poisoning symptoms; 10, economy in dressings. The disadvantages were the staining of the hands and bed clothes. For the former smearing with vaseline before and washing with alcohol after lessened this disadvantage if it did not entirely obviate it. The cases to which the treatment was most applicable were superficial burns, but Mr. Miles had used it in burns of even the fifth degree. The limits of picric acid treatment: After inflammation had subsided and granulations had formed, the treatment must be appropriate to that particular stage however produced. But this stage was much more quickly reached by picric acid than by any other method of preliminary treatment. The results were less tissue destroyed and smaller cicatrices.

A Study of the Blood in Rachitis.

Dr. J. Lovett Morse, in the Boston Medical and Surgical Journal, feels justified in drawing the following conclusions from results obtained in 20 cases of his own, together with those obtained by other observers. Most cases of richets are accompanied by anemia. This anemia may be of any form or of any grade of severity. The severity of the anemia varies, in a general way, with the severity of the process. The most common form is that in which the number of red blood corpuscles is normal, or nearly so, and the percentage of hemoglobin is both relatively and absolutely diminished. The anemia may or may not be accompanied by leucocytosis. Leucocytosis occurs more frequently in the cases with splenic tumor than in those without. It may be due to an increase in any or all of the varieties of white corpuscles. The specific gravity varies with the amount of hemoglobin. Finally, there is no form of anemia found in rachitis which may not be found in any other condition, and no form of anemia found in other conditions which may not be found in rachitis.

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Massage and Movements in the Treatment of Fractures.

Dr. Davis in the Annals of Surgery summarizes his views as follows: "It is my belief that mafsage and passive motion are not used to the extent that they should be in the treatment of fractures; that immobility of the fractured ends favors quick union with little deformity; that there are some cases in which, owing either to peculiarities of the fracture or the impaired constitution of the individual, the tendency to the formation of callus is marked. Mortion in these tends to the formation of exuberant callus and deformity. There are others in which bony union is unduly delayed; disturbance of the f.actured ends in these hinders union. It is wise to wait until the fractured parts are glued together, usually eight or ten days, before attempting any except the lightest massage, and any extensive passive motion after that time should be used carefully but diligently. Passive motion and massage, when first attempted, should be of the most gentle character, and not so violent as to disturb the relation of the broken bones. Any marked pain and inflammatory reaction following passive mation and massage are evidence that they have been too violent. The limb should receive massago and manipulation at each insdection or change of dressing, often daily. In some cases it is advisable to administer such massage as is possible without removing the splints. Persistent stiffness, particularly in fractures er injuries of the wrist, is often due to a rheumatoid affection lodating itself in the injured region. Massage is valuable in the treatment of such, and should be given to that part of a limb beyond the seat of fracture to preserve it in a normal condition. Such dressings and methods of treatment should be adopted as will allow of the greatest use of massage, and passive and active movements consistent with proper retention of the fragments."

Methylene-Blue in Malarial Fever.

According to Dr. Laveran methylene-blue cannot be considered as a genuine substitute for quinine in all cases of malaria. It should only be employed in cases of simple intermittent fever when, for some reason or other, quinine salts are contraindicated. It is well known that, in certain subjects, even small doses of quinine determine hemoglobinuria or other ill-effects. Quinine is also considered as possessing abortive properties, and it must, therefore, be employed sparingly and carefully during pregnancy. In such cases, methylene-blue may be employed instead of salts of quinine.

This drug appears also to be indicated for children who object to quinine on account of its bitter taste.

The administration of methylene-blue in doses of from 60 ctg. to 1 gme. daily apparently produces no ill effect, except slight cystitis in some patients, which subsides as soon as the administration of the drug is discontinued.

The Therapeutic Estimate determined upon Cord. Ol. Morrhuæ Comp. (Hagee), by Willard H. Morse, M. D., F. S. S., Iamatological Chemist.

I. A careful analysis shows the presence therein of those definite alkaloids and active medicinal principles obtainable from fresh cod liver oil, (and to which such oil owes its medicinal qualities), in combination with the hypophosphites of lime and soda. Therefore

II. The Cordial possesses the therapeutical characteristics of these components, with such physiological actions as are agreeable thereto.

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X. An agreeable preparation, readily taken, and fully serviceable, it is to be appreciated as a very important addition to the new materia medica.

Westfield, N. J.

Ulcerative Conditions

Dr. R. H. Baylor, Stewart, Tenn., in reporting his experience with Sennine as an Antiseptic and germacide dressing as well as stimulating healthy granulations on an ulcerative surface says: "There is nothing further desired in the Antiseptic line" and he has accomplished pre-eminently satisfactory results in ulcerative conditions where everything else had failed. Sennine is easily applied—a clean dressing and permanent relief in a short time.

Practical Evidence.

I used your sample of Resinol on myself for Pruritus Ani, which has been my curse for several years, defying all applications. The first application proved efficacious, and I am now using and prescribing Resinol for the above and several other itching troubles. In fact, I think it is the best remedy I have ever used for the diseases for which it is recommended.

H. B. LEIGHTON, M.D., Boston, Mass.

I have used your Resiuol in Inflammatory Rheumatism with happy results. Hope others will try it. I know they will be pleased.

E. J. BURNSIDE, M. D., Phila., Pa.

It gives me pleasure to say that Resinol is the best application for local treatment of Eczema I have ever used. I can also bear testimony to its efficacy in Erysipelas, and its soothing and healing virtues in all inflamed surfaces.

A. S. FRENCH. M.D., Lawrence, Mass.

It is but just that I should attest my satisfaction with the use of Resinol. It is a marvel of efficacy in Pruritus Ani. In relief of soreness, due to scalding from acute Nasal Coryza, it acts like a charm.

J. H. THOMPSON, M.D., Goshen, N.Y..

Resinol is by far the best application I have ever used in a practice of 48 years for the diseases recommended. A case of Eczema commencing on the scalp and extending over the entire face and which had been under the treatment of various physicians with no apparent benefit, was completely cured by it in less than two weeks.

J, J. WORTHY, M.D., Lavalle, Wis.

I am very much pleased with the effects resulting from the use of Ung't Resinol in cases of Itching Piles, Pruritus Ani, and Vulvae, Eczema. Erysipelas, &c. In fact it is the remedy "par excellence" in all cases where there is a Congested or Hyperaemic condition of the capillary Blood Vessels. C. D. SMITH, M.D., Atlanta, Ga.

I frequently prescribe Resinol, and am well pleased with its work. It has proved very useful in many forms of eruption of the skin, and especially so in Pruritus Vulvæ or Ani, and in Eczema of other parts of the body.

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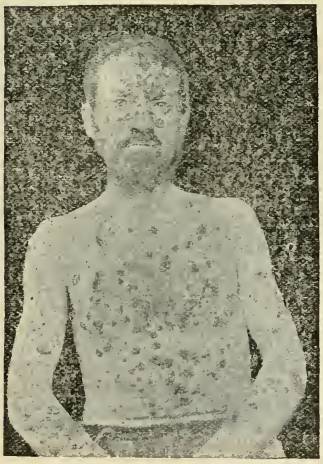

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Recovery from a Large Dose of Silver Nitrate.

At a recent meeting of the Leeds and West Riding Medico-Chirurgical Society, Drury (Lancet, May 15, 1897) related that while pencilling the throat with a stick of silver nitrate in the course of an actack of tonsillitis, the stick became detached and slipped into the œsophagus. There were localized pain in the gastric region and a strong conviction that death must soon follow. Immediately a frothy foam welled up in large qnanties, forcing its way through the mouth and nastrils, staining handkerchiefs and the bed linen. There was an irrestible feeling that the pencil way lying impacted in the gullet. Upon the urgent request of the patient a probang was passed. Mustard was given in large quantities and vomiting induced. Some time afterward commod salt was given. Careful searbh in the vomitted matter failed to disclose the presence of any of the pencil that might remained undisolved. Collapse and great exhaustion followed. For some days a milk diet was rigidly observed. All food, especially if sweetened, had a salty taste. There was no further vomiting, but constipation was pronounced. The temperature became subnormal and the earlier symptoms disappeared. During the following tw weeks there was well-marked desquamation over the whole of the skin. In the subsequent twelve months there were manp indicajions of dyspedsia, but some of these had been present in a milder degree previously. The pencil was composed of four per cent. of potassium nitrate and the remainder silver nitrate. There was little fluid or food present in the stomace at the time of the accident.

University College of Medicine, Richmond, Va.

The attendance during the last session of this institution was so great, (there being 270 students), that additional teaching facilities were necessitated. Consequently, a large modern structure, with a capacity for 500 students is now being built and will be ready for occupancy at the opening of the next session, September 30th.

Every convenience and facility will then be offered Medical, Dental and Pharmaceutical students for the pursuance of their respective studies.

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See advertisement elsewhere.

Hysteria in Children.

Dr. Jolly has published (Hom. Jol. of Ob. and Gyn.) a very interesting paper on this subject. He says: All the local manifestations of hysteria, the seizures as well as the real disturbances of the mind, are observed in children as well as in adults. We often see local disturbances and intractable pains confined to one region of the body (e. g,, so-called neuroses of the joints) with which spastic condition, such as paralysis and tremor, are frequently combined. Particularly are hysterical contractions and palsies observed in convalescence from acute and chronic diseases, when, after a long period spent in bed, the patient is urged to leave his bed and move about. Sometimes marked stuttering or mutism, either of short or long duration, is observed. In hysterical seizures highly increased emotional expressions are indulged in, spasms of screaming alternate with spasms of crying or laughing, and jactitation of the extremities occurs.

Hysteria does not originate in the uterus; its manifestations make their appearance long before puberty, in the boy as well as in the girl. There is no doubt that genital excitation (particularly onanism) does sometimes play a role in its production, but the main ætiological factor is always in inherited neuropathic disposition, and this, together with debilitating diseases, poor nourishment, anæmia, and an immoral education may lead to hysteria.

The American Association of Obstetricians and Gynæcologists will hold its tenth annual meeting at the Cataract House, Niagara Falls, on Tuesday, Wednesday, Thursday and Friday, August 17, 18, 19, and 20, 1897, under the presidency of Dr. James F. W. Ross, of Toronto. The railways have granted reduced fares on the certificate plan to all who attend the meeting, and the Cataract House has made a reduction from its regular tariff of charges.

Prof. E. H. Pratt will hold his eleventh annual class for didactic and clinical instrution in orificial surgery during the week beginning September 6, 1897. The class will assemble in the amphitheatre of the Chicago Homeopathic Medical College, at the corner of Wood and York streets, at 9 A. M.

The course of instruction will last during the week, occupying a four hours' daily sesion.

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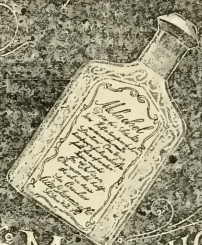

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Entero-Colitis in Infancy.

In the treatment of cases of acute entero-colitis, after attention has been given to proper feeding of the child and the removal of irritating material from the intestinal canal, it will generally be necessary to resort to drugs which will control the profuse and exhausting diarrhœa. The ordinary astringents have proved useless in these cases because by irritating the stomach and disturbing the digestion they increase the already great difficulty of nourishing the little patient, and owing to their decomposition and absorption in the upper part of the alimentary tract, but little, if any of the medicament reaches the seat of disease. Tannigen was introduced with a view of obviating these objections and has fully justified the claims of the earlier experimenters and may be considered as the anti-diarrhœal remedy par-excellence. In discussing the treatment of the entero-colitis Dr, M. A. Clark (Atlanta Medical and Surgical Journal, June 1897) writes of it as follows: "I find Tannigen a most valuable remedy for any diarrhœa. It is insoluble in the stomach and in the intestines is converted into tannic acid, the best astringent. By its use I have overcome what would have proved to be prolonged and severe attacks of this disease. When tannigen is pushed it is rarely necessary to resort to bismuth. Tannigen is both astringent and antiseptic and will not only check the diarrhœa, but will also destroy the fermentative changes taking place in the bowels. I do not claim that it will cure every case, but I do claim that if properly used, it will cure much more promptly than any other medicine."

The Treatment of Fractures.

Dr. W. L. Estes, in the International Journal of Surgery, says:

1. Unless a fragment is threatening to break through the skin, the fracture should never be reduced except by a physician, and then only when apparatus is at hand to keep the parts in permanent apposition.

2. Men carrying an injured person should not keep step, as the jar to the wounded part is much greater.

3. Strychnia for shock, morphia for pain, but *no alcohol.*

4. Always give anesthetics for reduction of a simple fracture. It is better and easier to reduce and set compound fractures without anesthesia.

5. It is very rarely necessary to make a patient go through the double agony of "temporary" and "permanent" setting of the broken bones.

6. In simple fracture gentle rubbing of the ends will assist in getting rid of shreds of tissue which invariably are caught there.

7. Nowadays a surgeon will rarely be satisfied that a bone is properly set, until verified by the x rays.

8. Plastic splints, preferably plaster-of-Paris, are surely the best apparatus when they can be applied.

9. Ambulant treatment is coming more into vogue. No simple fractures require constant confinement to bed, except of the innominata and upper third of the femur.

10. It is not necessary and sometimes very harmful to "wait for swelling to disappear" before putting on a permanent dressing.

11. A well applied splint with good apposition of fragments should not be removed too early. It is not necessary to apply massage early in ordinary cases.

12. Proper time for massage is two or three weeks after fracture of upper extremities and four or five weeks for lower extremities—*if the bones are slow to unite firmly.*

Diuretic Action of Salicylic Acid and Caffeine.

Dr. Siegert says that in a case of chronic peritonitis salicylate of sodium in both small and large doses lessened diuresis, the specific gravity of the urine being increased. With pure caffeine there was constantly observed a markedly increased diuresis, but with caffeine natro-salicylate the opposite effect was seen, the caffeine diuresis being suppressed by the salycilate. Caffeine produced its most marked effect after a course of small doses of salicylates. The use of caffeine alone made tapping of the ascites unnecessary owing to the absorption of all the œdema, which, on the other hand, was increased by the use of salicylates. The author shows by experiments on animals how the salicylates can abolish the diuresis produced by caffeine. Thus it is undesirable to use the combination of caffeine and salicylates where a diuretic effect is aimed at. In one case where tapping had been done some ninety times the use of caffeine made any further tapping unnecessary. The author has used caffeine with digitalis, and has found the diuretic effect very marked. It is desirable to use the insoluble caffeine in preference to the soluble combinations. The author would recommend the use of caffeine with or without digitalis in all cases of venous engorgement with intact kidneys in order to remove the œdema by diuresis.

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Saline Injections.

Lochelongue, according to the British Medical Journal, traces the history of this treatment from its introduction by Joehrnichen of Moscow in 1830 to its discussion in the Academy of Medicine and Society of Biology last year. In infectious diseases the injections are invariably followed by a well-marked rigor like that of pneumonia, the temperature rises, perhaps to 105.4 deg. F., with a quick pulse and panting respiration. These symptoms generally improve, perspiration sets in freely, and in from three to four hours a feeling of comfort supervenes, the headache disappears, the temperature rapidly falls to normal, the emunctories become active, and a veritable polyuria, or occasionally a profuse diarrhea, is established. If this improvement be not permanent another injection generally makes it so. Unhappily the system is sometimes so profoundly infected that death is hardly, if at all, postponed. The experiments hitherto made do not warrant any conclusions as to the action of these injections in intoxications. Nevertheless in typhoid fever, scarlatina, etc., as well as in diabetes, uremia, and paroxysmal tachycardia, they have been followed by improvement of the general condition, lowering of temperature, abundant diuresis, and increase of blood-pressure. In general the subcutaneous method is to be preferred. Venesection may precede the injection, and is indicated in uremia.

Mourette says that intravenous injection of saline fluid ameliorated the condition of a patient of Delbet's whose heart was apparently at fault, and that a typhoid patient of Widal's, twice benefited by a subcutaneous injection, succumbed during an intravenous one; he also mentions a fatal case of Chauffard's from the same cause. He concludes that intravenous injection should not be employed if it is possible to wait for an hour or two; subcutaneous injection, though slower, is equally sure, and from it no accident has been reported.

Formeaux agrees that the subcutaneous method is as efficient and less dangerous than the intravenous, and advocates the injection (about 600 grammes) as often as may be indicated during careful observation day and night in diffuse hemorrhage; fever is no contraindication; hypothermy is not to be feared. Moreover, they may be used before or after operation on anemic subjects by the surgeon, and should be in readiness during any intervention that is likely to be protracted. As a general tonic before, and more especially after, operative treatment a daily injection of a more concentrated solution—two per cent. of neutral phosphate of soda may be employed. In grave asthenia Cheron injects every two or three days five to ten grammes of a solution containing one part of crystalized carbolic acid and two of chloride, eight of sulphate, and four of phosphate of soda to 100.

Barbier reported to the Société Médicale des Hopitaux that in intestinal infections of children at the breast a 7-5 per mille solution injected under the skin of the abdomen, in quantities not exceeding in all thirty cubic centimeters in the twenty-four hours. apparently stimulated the entire system by increasing the blood-pressure and raising the temperature; and patients in a state of collapse, with pinched nose, half-closed eyes, and cold extremities, rallied after one or more injections. The treatment seems to him to be indicated in infectious enteritis with hypothermy, and in chronic cases with loss of strength and low temperature, but has no effect on the diarrhea, general nutrition, or any pneumonia other than those of collapse.

Hayem says that while the injection of saline solution is one of the most powerful means of restorative treatment, and is indicated in all choleriform conditions, it would hardly have any beneficial influence on gastro-intestinal dyspepsias.

The Expression of the Face in Disease.

The face is a good index to the state of one's physical being, and from it symptoms of disease can be detected almost before the patient is aware that anything serious is the matter with him. For instance, incomplete closure of the eyelids, rendering the whites of the eyes visible during sleep, is a symptom in all acute and chronic diseases of a severe type; it is also to be observed when rest is unsound from pain, wherever seated.

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Lead Poisoning and Gout.

Nobécourt, in the Edinburgh Medical Journal, discusses the part played by lead in the production of gout. Lead slowly permeates the whole system, and the intoxication progresses, though the characteristic features of lead poisoning may, owing to the tolerance of the organism, long be absent. There are cases in which the lead poisoning seems to be the sole etiological factor, and others in which it is associated with heredity or defective hygiene. In half the cases lead poisoning seems to be the only cause. Alcoholism does not produce it, at least in those not already predisposed. Every individual reacts in his own personal manner. Lead colic is very common, lead palsy less so, and lead encephalopathy exceptional, but lead is nevertheless the cause of all these conditions. Gout is most frequently met with in house painters, who as a class take up the work in early life, and are subject to a long and slow process of intoxication. It is rare among workers in white lead, as these workers are usually recruited from the unemployed, are in poor health, suffer early from symptoms of lead poisoning, and give up the work. Saturnine gout appears at about the same age as ordinary gout, between 30 and 40 years. The anterior period of intoxication is long, the average being twenty-one years. The coexistence of a hereditary predisposition to gout does not shorten the duration of the period of intoxication. The diathesis created by lead intoxication can be transmitted by heredity equally with the other trophic peculiarities which constitute hereditary gout. A form of gout therefore exists related to saturnine intoxication. It is slowly established. The patient does now exhibit the various morbid phenomena of latent gout common in subjects of this diathesis throughout their early life. He is subject rather to colic, arthralgia, encephalopathy, apoplexy, albuminuria, paralysis, dorsal tumour of carpus. He is, unlike the hereditarily gouty, pale, thin, and anæmic. The mode of evolution of saturnine gout is analogous to that of ordinary gout. It resembles in some respects the gout of patients debilitated by any cause. The distinguishing features are frequent repetition of the attacks, rapid generalisation of the arthritis, and one frequent solitary visceral manifestation—namely, interstitial nephritis. Less common phenomena are the rapid transformation of the acute into the chronic form, and the early development of tophi. Diagnosis is based on the same considerations as in ordinary gout. When it has become chronic and deformities exist, diagnosis must be made from ordiniary rheumatism; cases often remain doubtful. Again, gout in a saturnine patient is not necessarily saturnine gout. The patient's habits, history, conditions, and the duration of the intoxication must be ascertained. On these latter facts depends also the prognosis. If the lead intoxication has been of short duration the lesions may yet be amenable to treatment, and the course run be that of ordinary gout. After a long intoxication, lead being the sole factor, hope of cure is small, and the gout will probably take on a dangerous form. Both diseases benefit by the same treatment. Baths and vapour baths are good, but sulphur baths are injurious, increasing the formation of uric acid. Iodides in moderation are good, facilitating the elimination of lead by the kidneys. When nephritis exists general tonic and constitutional treatment should be carried out.

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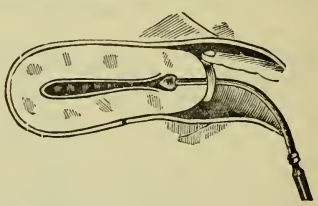

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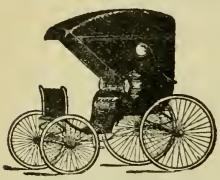

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The Charlotte Medical Journal.

VOL. XI. CHARLOTTE, N. C., SEPTEMBER, 1897. No. 3.

Causes and Treatment of Nausea and Vomiting of Pregnancy. *

By WILLIAM S. GORDON, M. D., Professor of Physiology, University College of Medicine, Richmond, Va.

The nausea and vomiting of pregnancy, though often distressing and occasionally serious, is a form of suffering which can sometimes be cured and frequently mitigated, but which, in a large number of cases, is regarded as an inevitable and irremediable disorder. The physician, helpless in his ignorance, is apt to become indifferent, while the patient appeals in vain for a surcease of one of her earliest, severest, and longest sustained sorrows. Chloroform alleviates or annuls the pangs of labor; will it ever be possible to overcome the most trying accompaniment of pregnancy.

The object in this paper is not to claim a complete solution of the problem, but to awaken and stimulate thought, provoke discussion, and call attention to certain facts and deductions which may be worthy of consideration.

It will be conceded that a scientific application of remedies depends upon a correct etiology; which, in turn, depends upon a correct interpretation of general and local symptoms. The nausea of pregnancy is relieved, on the one hand, by drugs which possess different physiological actions, or by measures addressed to one of several different conditions; and, as practical therapeutists, we are fortunate in attaining even partial success in treatment. On the other hand, conclusions based upon the effect of one drug or one measure are not invariably trustworthy; for under these circumstances each observer would infer that the disease, or morbid condition, which he rectifies is always owing to the specific cause which he has treated, and, as a consequence, he is tempted to herald the measure which he finds efficient as a cure for all cases. Another observer may use the same means and fail. One recommends stretching the cervix for nausea; another, lifting the uterus; another, a gastric sedative; and another, a nerve sedative or stimulant, the multiplicity of measures adopted with more or less success establishing the fact that the nausea has a common starting point, though it localize in the stomach, so to speak, or be of reflex origin.

Now, it cannot be denied that a displaced uterus, an irritated cervix, a congested kidney, or pressure upon any of the abdominal viscera may be properly assigned as causes of reflex nausea during pregnancy as well as in the unpregnant state. What explanation, however, is offered when none of these causes are present, and when the sickness occurs in the very beginning of pregnancy?

Although the structural and functional changes taking place in the uterine system are common to all cases of early pregnancy, nevertheless nausea is not an invariable result of the new order. Why are some women exempt? There must be something more than a manifestation of local disturbance. The general condition of the patient must be interrogated.

Whether of reflex or central origin, the terms employed in its description and the significant characters of the symptom make it clear that the nausea is not due to gastric disease. As we are all aware, the nervous system is involved; and remembering that reflex causes can be often either eliminated or not proved, we are led to the belief that the central nervous system is in some way deranged. What, then, is this condition of the nervous system and how is it produced?

The nausea of railway and ocean travel has been stated to be due in part to shock caused by the swell of the ocean or the upward and downward motion of the cars propagated through the spinal column to the brain. The relief obtained by recumbency of position does not necessarily prove the assertion, inasmuch as nausea in general, whatever be its source, is, as a rule, diminished or perhaps relieved when the subject reclines. In my own opinion the theory advanced is tenable in certain instances, especially in railway travel, while it may hold good on the ocean. Another reasonable theory is that the sickness is caused by the demands made upon the nervous system in the endeavour to adapt itself to a new environment and unusual conditions. This might be called a semi- or cerebral reflex, similar to the nausea caused by the effort of an individual to look through unsuitable glasses. The sickness caused by riding backwards in a vehicle, or by swing-

* Read before the Virginia Medical Society, at Hot Springs, Va., Sept., 1897.

ing, must be explained by the foregoing theories. To these forms of nausea, that of pregnancy bears a certain resemblance, and may be partly accounted for in the same manner. The nervous system is suddenly called upon to assume new and increased functions. It may be said to be caught off its guard and overtaxed until habituation occurs.

But does this additional explanation of nausea answer our main question? Why are not the demands made upon the nervous system by other and more exacting functional changes upon the brain and cord attended more frequently with nausea? Why should not normal menstruation with its varied local disturbances and nervous complexities, be usually attended with nausea? Early pregnancy is, functionally, no more complex and equally as normal. The abrupt cessation of menstruation does not remove the difficulty, for under other circumstances, it does not give rise to nausea as often as pregnancy. In early pregnancy, the mere tax upon the centres in regulating the growth of the uterus and the increased blood supply can hardly afford a solution; for the local conditions, viewed from a purely anatomical or physiological standpoint, are far less complex than many morbid conditions unattended with nausea. Is the normal presence of the ovum in the uterus the one source of reflex vomiting? Surely not. What, then, may be again asked, is the peculiar condition of the nerve centres in pregnancy leading to nausea which cannot always be explained by the laws of reflex action, by pressure, by new exactions, or by any of the possible causes already enumerated?

May not the essential cause be found in the impoverishment of the maternal nervous system by the withdrawal of phosphorus for the growth of the uterus and its contents?

In order to substantiate this belief, let us consider several pecularities of the nausea of pregnancy. Its occurrence or its intensity is noted so often in the early hours of the day that it has acquired the title of "morning sickness." It disappears or diminishes usually in the latter part of the day. It is frequently severe as soon as the woman opens her eyes and before rising. Nausea in general is, in most instances, worse when the patient assumes the erect position. This truth does not always hold in pregnant cases. During the night the mother's system receives a compensating rest, it is true, but being at the lowest ebb in the early morning; and while the fœtus has been rapidly developing, the maternal store house has been rapidly emptied by its contribution of food in general and of phosphorus, the great tissue builder, in particular. The loss to the mother's nutrition has not been repaired. The morning meal, with the hot coffee and other stimulants—especially nervines—feeds and fortifies the loser, and her nervous system is temporarily relieved. Although in motion during the day and subjected to its wear and tear, she suffers less. Diversion alone cannot explain the amelioration.

Another noticeable point is that, with a few exceptions, the nausea is worse during the first half of pregnancy, when the maternal system is being exhausted and when the fœtus is most rapidly developing. Subsequently, the mother's appetite and nutrition improve, the child grows less rapidly, and the sickness abates or ceases. There must be an intimate relation between these two conditions of mother and child. The mother's becoming accustomed to her state does not wholly explain the fact just stated.

Another feature of morning sickness is that it does not ordinarily begin at conception, but about the time when the fertilized ovum, after its journey of some days—possibly two weeks—has entered upon its intra-uterine growth. This goes to prove that conception in itself and the immediate assumption by the nervous system of increased functions is not sufficient to account for nausea. Incidentally, it is true that nausea is often observed during the first stage of labor, but here it is manifestly of reflex origin and due to the mechanical irritation of the cervical nerves by stretching. In early pregnancy, however, although the uterus is enlarging, still its mere increase of size, as previously stated, can hardly be responsible for the excessive systemic disturbance.

The decreased elimination of phosphorus by the kidneys is an interesting point. That the crystals precipitated by Tessier's fluid in the urine during early pregnancy may be imperfectly formed because of a deficiency of phosphoric acid is not to be denied. I have always believed, however, and stated that the irregular crystals were not pathognomonic of pregnancy, and that such appearances as have been described will be found in other conditions—such as nephritis—characterized by deficient excretion of phosphoric acid. I have seen the imperfectly formed crystals in the urine of males. The corroborating lesson, so far as my own belief is concerned, is that the urinary analysis proves that the woman is not excreting the normal amount of phosphoric acid, although the amount furnished to the fœtus is another matter.

The verification of the theory advanced will depend upon the effect obtained by in-

creasing the nutrition. Careful attention to the digestive organs, with persistent or forced feeding will be indicated, while it is not surprising that the administration of phosphorus should be suggested. The hypophosphite of calcium and sodium is, doubtless, in most cases, the most efficacious of the phosphorus salts, liberating the element most freely, in the best form for assimilation, and with the least probability of deranging the stomach. My experience has been, so far, too limited to justify any statistics or to afford a practical demonstration of the theory; but if the previous reasoning and deductions be logical, I would ask for a trial of the plan of treatment recommended.

A nauseated patient is not easily made to assimilate, and the stomach must be controlled by appropriate agents in order that nourishment may be retained, digested, and absorbed. In short, the nervous system must be quieted and supported. In order to fulfill both indications, the bromides or other nerve sedatives can be used in conjunction with the hypophosphites. In this way will the nausea of pregnancy be viewed and treated as a functional and typical neurasthenia.

Failure to accomplish the desired result in any given case, or, indeed, in all cases, would not necessarily refute the argument of which the treatment is an outcome, since we may fail to remove a condition the primary cause of which has been ascertained. But if the views expressed prove to be erroneous, I shall not regret the endeavor to add to our knowledge or to subtract from our ignorance.

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Some Characteristic Symptoms that Help in the Differential Diagnosis of Iritis.*

By W. H. Baker, M. D., Lynchburg, Va.

I propose to ignore the more modern and tempting subjects in ophthalmology, and reintroduce to you a subject that may be called old and hoary, but it is still a most dangerous and familiar enemy, namely, *Iritis*.

I was induced to select this disease for the subject of a brief paper, because it is so often mistaken for conjunctivitis, and we so often see cases suffering with iritis, that are being treated for conjunctivitis, with the usual astringents, and the usual results following a neglected iritis, that is a pupil closely adherent to the anterior surface of the lens capsule, bound down by iritic adhesions. A sad victim of a mistaken diagnosis. Therefore it is my desire to call attention to the most apparent, the most easily discovered, and the most characteristic symptoms of iritis.

The books tell us that there are three principal forms of the disease. These are the plastic, the parenchymatous, and the serous, and that there are many types modifying these main varieties. But as the characteristic symptoms are common to all the forms and types of the disease, and the results of maltreatment are about the same in one as in the other, we will use only the generic term "*iritis*" in speaking of this trouble.

Just so we do not call it conjunctivitis or glaucoma, we may with perfect safely call it any or all kinds of iritis.

The difference in the appearance of the sclerotic zone, in the two troubles is very marked. In conjunctivitis, the translucent conjunctival membrane is inflamed, imparting to the "white of the eye" a velvety red appearance, and on everting the eyelid it will be seen that the redness is continuous over the whole palpebral conjunctiva, whereas, in iritis, the redness lacks the velvety appearance just mentioned, and is caused by an injection and meshing of the vessels of the sclerotic coat, particularly apparent at the corneo-scleral junction, and on drawing the lower eyelid downwards it will be noticed that the injected vessels do not move with the conjunctiva, but remain stationary. Thus proving that they are situated beneath the conjunctiva in the sclerotic coat.

In the early stages of iritis, the palpebral conjunctiva is unaffected. It is important to recognize the disease as early as possible in order that we may successfully use remedies for the prevention of synechia. After the disease has continued for several days, the conjunctiva becomes more or less involved, but there is never any sticking or gluing of the eyelids together by mucopurulent matter, as in conjunctivitis, and there is always a great deal more lachrymatus and severe pain, referred to the supraorbital region, which increases as the night advances with intense photophobia, whereas there is only slight, if any, photophobia in conjunctivitis.

On comparing the diseased with the healthy eye, (a practice that should be adopted in all cases of eye trouble,) we will find a lack of brilliancy in the coloring of the fibres of the iris, and a muddy or cloudy

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appearance of the pupil, and on testing the activity of the pupil, by opening and closing the eyelids of the affected eye, it will be seen that the iris is much more sluggish in its movements than it is in the healthy eye. None of the symptoms mentioned obtain in conjunctivitis. Furthermore, the patient will complain of dimness of vision and inability to use the eye without much pain.

When the eye is examined with a reasonable amount of care, it is very apparent to the most casual observer that there is a wide difference between the two diseases. So wide is the difference that the books (with few exseptions) ignore the possibility of mistaking the one for the other, but, nevertheless, the mistake is made with comparative frequency, accompanied with dire injury to the eyesight, if the greater is mistaken for the lesser trouble.

The busy and often over-worked physician sees comparatively only a few cases of iritis and very many cases of conjunctivitis. Therefore, when a case of inflamed eye presents itself, he is often forced to give it a rapid and too casual an examination, prescribes his favorite astringent, (the worst thing that can be used in iritis,) and tells his patient to report again in a few days. Should the case prove to be a case of iritis, the patient will no doubt be forced by the pain to report very promptly, and very much sooner than expected; but even then it may be too late, because the secretions thrown off by an inflamed iris are copious and rapid, and very probably that membrane will be found closely adherent to the crystalline lens, with which it lies in contact, and we find an eye irreparably injured, eyesight permanently maimed, and all because of a mistaken diagnosis.

Surgical procedures for the purpose of destroying the adhesions formed between the iris and the anterior capsule of the lens are very dangerous to the integrity of the eyeball, as a secondary iritis may follow the most carefully and skilfully performed operation. This fact makes it more important to recognize the trouble early, so that the proper remedies may be used vigorously, and then surgical interference in the future will be unnecessary.

The first remedy indicated in the treatment of iritis is one of the mydriatics. The sulphate of atropia is the most reliable, and most easily procured. The hydrobromate of scopolamine is valuable as an adjunct, and will frequently destroy very recent adhesions, but unfortunately even if we succeed in destroying the adhesions by the use of mydriatics, the sight will be marred more or less by the pigment spots, left upon the anterior surface of the lens, where the iris was adherent. Hence the great importance of an early recognition of the disease is still more emphasized, for even a delay of only a few hours may be disastrous. The very first questions to ask a patient who presents himself with a sore or red eye, are first, were the eyelids stuck together this morning when you awoke? and second, do you suffer any pain? The answer to these questions will help very much in arriving at a correct diagnosis. Should the first question be answered in the affirmative, and the second in the negative, it will usually be safe to prescribe the much adored astringent. I say *much adored*, because all doctors seem to have a great love for astringents in all cases of inflamed eyes, and that often in utter disregard of the cause of the inflammation and redness. Fortunately for the eyesight of humanity, the majority of such cases are conjunctivitis, and they are right in prescribing astringents. If the questions are answered doubtfully, or a positive statement made of some pain and no gluing of the eyelids, and still all other symptoms of iritis are absent, be sure to use a mydriatic. You can do no harm in following such a course of treatment, for in the vast majority of cases that complain of some pain around the eyeball, a slight mucous discharge with conjunctival redness, and no gluing of the eyelids in the morning, it will only be a short time until iritis will be so apparent "that he who runs may read," and the doctor will have the satisfaction of knowing that he has gotten a good safe lead in the race for the salvation of an eye.

When convinced that we have an iritis to deal with, let us not content ourselves with a weak solution of sulphate of atropia dropped into the eye, once or twice a day, but use a solution of four (4) grains to the ounce of water, dropped into the eye every two (2) hours.

A swollen and inflamed iris does not yield readily to the effect of a mydriatic, even after we have obtained a thorough response to the influence of the medicine, the effect will very soon pass away, and contraction of the pupil will soon follow. An instillation in the morning followed by a good dilatation will be a contracted pupil in the afternoon, with adhesions, if the drops are not used in the interim.

The iodide of potassium with mercury, should be given in every case of iritis, unless there is a good history of rheumatism, and even then it is well to combine them with the salicylates. These remedies have a good effect in iritis, even if there is no history of syphilis.

I find that it is almost useless to make inquiries about syphilis. As a rule, people

who are otherwise honest, will lie and repudiate with scorn the implied base accusation of their ever having been exposed to the infection.

Therefore, if there is no positive contra-indication the usual anti-syphilitics should be given.

I never saw a case of iritis in which sulphate of atropia locally, and potassium iodide and mercury internally, failed to do good. And I never saw a case of conjunctivitis harmed by these remedies. So if there is any danger of an error, be sure to err on the safe side. The sulphate of atropia never causes any injury in conjunctivitis, but a failure to use it at the proper time has resulted in the production of many disabled and useless eyes.

The danger of irido-leuticular adhesions to the future well being of the eye is largely in proportion to the extent of the adhesions. If the synechia is complete, and the connection between the posterior and anterior chambers obliterated, we may have constantly recurring attacks of iritis, which can only be prevented by a successful iridectomy.

One form of iritis, designated by the term *serous*, is accompanied with so much swelling of the iris, and secretion of lymph, that there is a great deal of tension and hardness of the eyeball, and consequently it has been mistaken for acute glaucoma. But worse still, this trouble has been mistaken for iritis, and treated with mydriatics.

In glaucoma we have a cloudy aqueous humor, sluggishness of the pupil, and dimness of sight, as in iritis, but no photophobia, and the cloudiness takes on a decidedly greenish tint at the pupil, the pupil is always dilated, whereas it is contracted in iritis, and while it is sluggish in iritis, it is usually inactive in glaucoma under the stimulus of light. On looking at the eye obliquely it will be seen that the iris is pushed forward into the anterior chamber in glaucoma with the curvature outwards, conforming to the inner curve of the cornea. The pain is more neuralgic in its character, and there will be a history of what the patient calls neuralgia of the eyeball, the attacks have been rather frequent recently and each attack a little more severe than the last. Happily this trouble is much rarer than iritis, having become much less frequent, as the proper correction of errors of refraction approaches nearer and nearer to an exact science.

It is very important that iritis and glaucoma should not be confounded, because this is the one eye trouble in which al mydriatics are to be avoided as religiously as the plague, because they will do untold harm by increasing the tension of an already hard eyeball, and will add the finishing touch to the complete destruction of the eyesight. So then it is just as important to recognize the characteristic symptoms of glaucoma as against those of iritis, as it is to recognize the symptoms of iritis as against those of conjunctivitis.

There is often just as much redness of the sclerotic in glaucoma as in iritis, but sometimes no redness at all. The hardness of the eyeball is more marble like in its feeling under the eyelid, but nothing like so sensitive to the touch as in iritis.

To recapitulate briefly, we will say that if a patient presents himself complaining of the eyelids being mattered and stuck together in the morning, but little if any photophobia, no pain, and if the pupil is clear and muscular fibres of the iris unclouded, and the sight undimmed, we may safely prescribe an astringent. But if there should be no gluing of the eyelids, an angry red eye, some pain, whether much or little, make a careful examination, comparing the iris of the diseased eye with that of the normal; and if there is any sluggishness of the pupil, or lack of brilliancy in the color of the iris, when compared with the activity of the pupil and brilliancy of the iris in the healthy eye, and contraction of the pupil with little, if any, tension of the eyeball, prescribe a mydriatic.

If there is only a slight injection of the sclerotic zone, no photophobia, a dilated pupil, and considerable complaint of neuralgic pain, more or less constant, and increasing towards night, and hard eyeball, be careful about prescribing a mydriatic, for we may have a case of glaucoma, and in avoiding scylla, we may fall into charybdis.

Diagnosis of Shock.*

By Hugh W. Taylor, M. D., Richmond, Va., Prof. Practice Surgery, Uuiversity College of Medicine, Richmond, Va. Surgeon to Virgina Hospital, etc.

The frequency with which shoch is met and the difficulties often attending its differential diagnosis, is my apology for presenting this paper.

SHOCK FROM HEMORRHAGE.

Most of us have experienced the embarrassment incident to the difficulties of differentiating between the symptoms of shock

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and those of hemorrhage. The folllowing is an apt illustration :

A young man received a knife wound just over the left nipple. I saw him in an hour. Several physicians were with him and had promptly administered whiskey, strychnia, etc. In spite of vigorous treatment, he was still in a state of profound collapse—was in fact, shocked to such an extent that fatal syncope was anticipated, and several of the doctors present expressed the opinion that the patient would die.

To what was the great depression due? Shock, per se, or to shock plus hemorrhage? The general impression among the medical men in attendance, was that it was shock plus hemorrhage—hemorrhage incident to penetration of the chest and wounding of the heart or lung or some large blood vessel in the cavity of the chest. It was an important question to settle. If it was uncomplicated shock, only such remedial measures as are indicated in shock need be resorted to, and an encouraging prognosis could be given. If it was shock plus hemorrhage, the prognosis was grave and operative interference for the purpose of arresting hemorrhage was probably called for. Vigorous treatment for the relief of the profound syncope seemed clearly the proper line of treatment. But if there were several blood vessels within the chest, reaction without hæmatosis would mean more bleeding and renewed depression. In this case it was dangerous not to resort to heroic measures to overcome the profound shock and yet if there were hemorrhage, speedy and complete reaction would entail fully as great a danger in the renewal hemorrhage. Physical examination of the chest failed to show an accumulation of blood at any point as evinced by its pressure effects. Nothing was discovered which warranted the conclusion that there was extravasation of blood in either the pleural or pericardial sacs, or in the mediastinum or cellular tissue, and there was but a trifling amount of bleeding from the external wound.

On inquiry it was ascertained from one of the physicians who saw the patient a few minutes after the cutting occurred, that the shock was at that time as profound as at any subsequent period. In short, the symptoms of profound syncope were immediate in their onset, reached their acme at once, and were not progressive in character.

This knowledge was the key to the situation and justified me in excluding hemorrhage and in diagnosing shock. In an hour or two safe reaction was brought about its advent, having been hastened by the usual remedial measures in shock, viz., strychnia, digitaline and atrophine hypodermically, and hot saline solution, whiskey, and coffee by enema. Response to the treatment was in fact, so very prompt that we did not find it necessary to resort to cellular or intravenous transfusion, preparation for which was begun as soon as the patient was seen. A due appreciation of the embarrassment incident to such cases intensifies our interest in all that pertains to the diagnosis of shock.

In many of the traumas of the great cavities, viz., the skull, chest, abdomen, pelvis, and spine, it is often a perplexing matter to differentiate between the symptoms of shock and those of hemorrhage, or between those due to shock and some more serious morbid lesion. In the case of trauma to the skull, or more properly, its contents, we expect shock.

The nice point in diagnosis is to ascertain in the incipiency of the troubles. to what extent the manifestations of injury are due to shock per se, and what part is the result of intracranial lesion. What are the brain lesions whose symptoms are at one time or another, identical with those of shock? There is hardly an injury to which the brain is liable that may not primarily manifest only the symptoms of shock and exceptionally even in the gravest intra-cranial traumas the symptoms at first are only those of shock.

I recall the case of a drunken man, who tried to jump on a moving train. He was thrown, his head striking on a cross tie and as a result one side of his head was crushed like an egg shell. In a few hours he was brought to Richmond. I met him at the Depot. He was perfectly conscious and gave me an intelligent account of how the accident occurred. He was able to walk from the car to the carriage and to sit up while being driven a mile or more to a hospital I lifted *out of* more than *off* his brain fragment after fragment of bone and from one point of his brain, I fished out a plug of wood as large as the end of my thumb. Here was a case of compound comminuted depressed fracture of the skull with serious brain laceration and a total absence of the stereotyped symptoms of such an injury. The symptoms for the first six or eight hours after the accident were only those of shock and were not even of a severe type.

A case in point was seen yesterday. A little boy was struck by an engine and suffered a compound depressed fracture of his cranial vault. He was brought to Richmond and I saw him in two hours after the accident. He was profoundly shocked, cold, clammy, no radial pulse, blanched features. He was reported to have bled very freely from the skull wound. There were

no brain pressure symptoms whatever. No paralysis, no stertor, only symptoms of profound shock. There was no hemorrhage. He had evidently bled until his blood vessels were collapsed. Treatment for shock and hemorrhage was vigorously resorted to. As his condition did not improve in an hour or two the depressed bone was elevated. The dura was found torn into the superior longitudinal sinus and explained the profuse hemorrhage and profound syncope. My only surprise is that he did not bleed to death at once, as it was, he had practically lost all of the blood in his vessels. An incision of the dura showed that the brain was not injured. How were we to tell that the shock in this case was that of hemorrhage and not brain contusion, and brain pressure? It is evident to my mind that the torn sinus and hemorrhage, and not the depressed bone caused the fatal issue.

The differentiation between rupture of the middle meningeal or middle cerebral artery or some of their branches, and shock is often a nice and all important point. As is well known, it has not been long since we have known the symptoms of such ruptures well enough to make a diagnosis and formerly the mortality from such injuries was frightful. A correct diagnosis and operation to remove the clot and stop the bleeding marks one of the most important of the many advances in cerebral surgery. The successful treatment of such a case involves of course, an early diagnosis and removal of the clot before the diastrous consequences upon the brain incident to prolonged pressure by the clot.

If the case is one of shock, the treatment is simple and the prognosis favorable. If there is ruptured artery, trephining to tie the artery and remove the clot, is called for and the prognosls is not so good. Ordinarily a rupture of one of the arteries presents the following clinical picture and materially aids in differentiating this condition from shock.

In rupture of the middle meningeal artery, the injured person, after a lick on the head, usually falls—is stunned or shocked. But after a varying period of syncope or shock, the patient recovers consciousness, his mind becomes clearer and perhaps he gets up and walks about. In a short time, however, which varies with the rapidity of the outpour of blood, he again becomes unconscious with the usual symptoms of pressure on one or more of the centres along the motor area. Shock then followed by reaction and recurring shock plus pressure symptoms, point to intra-cranial hemorrhage and a rupture of some branch of the middle meningeal or middle cerebral artery.

A case in point. A gentleman in lifting a window sash lost his balance and pitched out into an area a few feet deep. He was shocked, stunned and dazed, but in a short time recovered sufficiently to walk half a mile to his boarding house. Reaction was strong and there were no symptoms of cerebral injury for four or five hours. From that time on, however, he presented all the symptoms incident to the gradual formation of a widening clot. Center after center along the motor area becoming involved as the area pressed upon increased. Here was shock with reaction lasting hours with recurring shock and pressure symptoms. Prolonged shock would suggest rupture of a large artery (as the main trunk of the meningeal) or a number of arteries with rapid effusion and the merging of symptoms of trauma into those of shock from hemorrhage and pressure. Shock and hemorrhage fortunately do not as a rule occur simultaneously. Profound shock is one of nature's most potent hemostalics. All of us have seen patients bleed until they are shocked, then the bleeding spontaneously stops to recur possibly with the partial advent of reaction. Shock restrains hemorrhage, and in cerebral lesions is often beneficial. Hemorrhage induces shock, cerebral hemorrhage is supposed to produce more profound shock than hemorrhage from other parts of the body.

In intra-cranial injuries, if the primary shock is followed by reaction which is lasting, we may feel well assured that we have not intra-cranial hemorrhage to contend with. On the other hand, shock with reaction and recurring shock, or prolonged shock, points strongly to intra-cranial hemorrhage. This difference in the onset of symptoms of shock and hemorrhage is our only diagnostic means, and the importance of making a correct diagnosis in order to adopt a rational course of treatment or give an intelligent prognosis, is of the utmost importance.

Shock followed by reaction lasting twenty-four hours or more, which is then succeeded by recurring shock, stupor, delirium, or cerebral irritation, usually points to cerebral contusion or laceration with sero-sanguinous effusion. This condition of cerebral contusion probably represents the so-called prolonged shock of the older writers. The term prolonged shock, we think, here as elsewhere a misnomer. The term cerebral contusion is very much better, as it expresses pathological lesion and suggests its possible consequence.

If the symptoms of shock are prolonged beyond the period of time, during which

shock should continue, and are merged into, or succeeded by, symptoms of cerebral irritability or stupor, we have a condition of cerebral contusion plus shock.

Only a few weeks ago, a gentleman on a bicycle collided violently with a horse and buggy. I was at hand when the accident occured and had the patient carried into the nearest house. He was badly shocked, but was that all? Anxious friends made urgent inquiry as to the future of the patient. The case proved to be one of brain contusion and it was weeks before the patient was out of immediate danger. No symptom other than those of shock was appreciable to enable us to make an early diagnosis and to give a correct prognosis.

In cerebral contusion, so-called, we have a clinical picture, which cannot be differentiated from shock. This is true to such an extent that many writers deprecate the use of the term cerebral and spinal concussion in that it represents no known pathological lesion and presents no appreciable symptoms, which are not equally characteristic of shock. If we compare the symptoms of concussion with those of shock, we find they are identical. If there is any lesion common to so-called concussion, it cannot be discovered by our imperfect means of examination. It is claimed by some that lesion do occur in concussion but are not appreciable by our imperfect methods of examination. In the absence, however, of demonstrable proof of such lesions, this assumption only assumes the difinity of a hypothesis. We are in accord with the opinion of those who think the term cerebral and spinal concussion should not have a place in the nomenclature of disease.

SHOCK IN INJURIES OF THE CHEST.

In trauma of the chest, it is often difficult to differentiate between shock and hemorrhage. The constitutional symptoms of shock and hemorrhage are the same, but here, as elsewhere, the time of onset of symptoms is significant—shock occurring immediately and reaching its acme at once, while hemorrhage appears more slowly, (unless it is from a very large vessel) and is progressive and more persistent in its effects. Reaction from shock under proper treatment, is prompt and lasting.

Profuse hemorrhage intensifies and prolongs shock and entails acute anemia which is not speedily recovered from.

In addition to the information incident to the time at which shock should occur and its subsequent behavior, in chest wounds with hemorrhage we should expect symptoms due to pressure of accumulated blood.

Obviously a distended pericardial sac entails an increased area of cardiac distress and embarrassed heart action with obscured heart sound and, to some extent, pressure upon the lung by the distended pericardium and interference with respiration.

Distension of the pleural sac, with blood, should also be appreciated by dullness and symptoms of pressure on the lung and heart. Briefly, our diagnosis of shock from intra-thoracic bleeding must depend largely upon ascertaining the facts, as to the time of the onset of the constitutional symptoms of shock, the length of time these symptoms continue, whether or not they reach their acme at once, or are progressive, and the presence or absence of symptoms due to pressure of blood accumulation.

SHOCK FROM INTRA-ABDOMINAL LESIONS.

In no class of traumas and in no field of surgery is the diagnosis between shock and hemorrhage beset with greater difficulties than in the case of injury to the abdomen. Penetrating and contused wounds of the abdomen with visceral lesions are attended with such a frightful mortality that an early diagnosis is imperative. The key to the successful treatment of such cases is their early recognition, before the occurrence of acute anemia from hemorrhage or septic peritonitis from extravasation of the contents of the hollow viscera into the peritoneal cavity. The mission of operative interference is ideal, when we operate to prevent such complications rather than when it is done to cure them. In all such cases interest largely centres in the inquiries:

Is it shock, per se, incident to trauma limited to the abdominal walls?

Is it shock with penetration and no visceral lesion?

Is it shock with hollow or solid visceral lesions?

By what tokens are we to know when the shock of trauma ends and that of hemorrhage or sepsis begins?

It is a well known fact that profound and fatal shock may exceptionally attend a slight blow on the abdomen, which inflicts no lesion to the abdominal walls or upon the underlying viscera. The fate of our distinguished countryman, James Corbett, is an evidence of the seriousness of a blow over the solar plexus. On the other hand, it is equally well known that serious and fatal intra-abdominal lesions may exist with a total absence, or at least, a minimum amount of shock.

It is not uncommon for a man who has been shot through and through his belly, or whose abdominal viscera have been torn by a contusion, to experience at first an inappreciable degree of shock. Most of us have,

perhaps, seen a man shot in the belly and under excitement continue to manifest great physical endurance. This, however, is the exception, for as a rule a ruptured or wounded hollow or solid viscera is attended by appreciable shock. In the former case, the shock is largely due to extravasation of the hollow visceral contents, in the latter instance to the loss of blood and the pressure of blood as a foreign body in the peritoneal sac. While this is the rule, exceptions occur sufficiently often to render the presence or absence of shock of no diagnostic value when taken alone in estimating the nature or extent of the abdominal lesion.

The presence or absence of shock is no guide in diagnosing a non-penetrating, from a penetrating wound of the belly. Nor does it tell us a contused wound of the abdomen with visceral lesion, from one in which only the abdominal walls are injured.

In penetrating wounds of the abdomen, it is no guide to the presence or absence of visceral lesions. While shock, per se, is no guide, here as elsewhere the behavior of shock is of diagnostic interest. Uncomplicated shock should pass away in a short time—in a few hours. Shock followed by reaction, which is succeeded in a few hours by recurring shock, points to wound of some one or more of the solid viscera, or to an injured messenteric vessel, the recurrence of shock being due to hemorrhage and the mechanical irritation of the accumulated blood. In the case of a wounded hollow viscera, the extravasation of its contents into the peritoneal cavity, induces renewed shock which is primarily due to the irritation of the foreign substance, and secondarily it is due to general or local septic peritonitis.

Prolonged shock after abdominal contusions and wounds suggests something more than a vaso-motor paresis, or a vaso-motor over-stimulation and paresis. It indicates that the symptoms of primary shock have merged into those of hemorrhage, or in the case of rupture or wound of a hollow viscera, primary shock has been augmented by shock incident to extravasation and the beginning of peritonitis.

I was once sitting by the bed side of a young woman telling her she had tubal gestation and that an early operation was necessary. While I was thus engaged, she became cold and clammy, blanched and pulseless—all of the symptoms of profound shock. Was it psychical from the horrible news I had just conveyed to her, or was it hemorrhage from ruptured tubal gestation? Its progressive character and continuation warranted the conclusion that the syncope was due to hemorrhage, and an immediate operation disclosed a ruptured tube, and the peritoneal sac enormously distended with blood.

As I have said, I do not believe very much in prolonged shock, especially is this true as to intra-abdominal lesions. Many of the fatalities credited to shock, I think, should be attributed to shock plus intra-abdominal bleeding.

Shock prevents hemorrhage at first and notably after abdominal work is benificent —saving the lives where insufficient hæmastosis has been secured. As a rule, shock from intra-abdominal trauma is immediate in its onset, and reaches its acme at once, and is not progressive. Shock from hemorrhage and sepsis comes on slower and is progressive and more lasting in its effects. Not shock per se, but the way in which it is manifested, constitutes it a guide of importance in intra-abdominal lesions.

It is not infrequently a difficult matter to differentiate between shock and septic intoxication. The toxæmia incident to typhoid gall tract and appendicular infection is in some instances so rapid in its onset as to closely simulate shock. Shock and fat embolism, and shock and venous thrombosis present many symptoms in common. Doubtless not a few of the so-called cases of pro. longed shock are really cases of fat embolism thrombus, but both of these conditions are more likely to occur, later than the time during which shock should continue, and are usually associated with a special class of wounds.

Are the effects of shock always transitory? A phase of shock of interest and importance from a diagnostic point, is its relation to trauma of the nervous system and one of its supposed sequences, the so-crlled concussion of the cord.

I must beg to be classed with those who deprecate the use of the term spinal concussion. As in the case of brain concussion, spinal concussion is a misnomer and misleading, and under the guise of "railway spine" has done much harm and no good.

Concussion of the spine, or railway spine is shock psychical or traumatic—psychical when an impression, without trauma, has been made upon the central nervous system, by horrible surroundings of any nature, usually upon an impressible temperament. Traumatic hysteria, neurasthenia or neuroses are closely related to shock, as it is the effect of shock upon the central nervous system, and is usually an effect which, in severity, is out of all proportion to the extent of the injury. In traumatic neurasthenia there is no appreciable lesion which can be held responsible for the symptoms. Some of the most difficult problems we are called upon to solve, is the distinction be-

tween nerosis, incident to shock and that due to organic lesions. Shock is supposed to be transitory. Traumatic neurasthenia, an effect of shock, is lasting, and is an evidence that reaction does not necessarily mean that the morbid effects of shock have been recovered from.

Profound shock, psychical or traumatic, is to be deprecated, not only on account of its immediate, but also because of its possible remote consequences. Perverted nerve force, incident to the immediate and remote effects of shock, entails improper functional activity, and as a further consequence diminished local and systemic tissue resistance, with all that such a condition implies, in the conflict between health and disease.

Have we Found a "Radical" Cure for Inguinal Hernia.*

By W. B. De Garmo, M. D., Professor of Special Surgery, N. Y. Post-Graduate Medical School and Hospital.

When I was honored by an invitation to read a paper before your society, I felt all the more inclined to accept because I had already experienced the pleasure of attending one of your meetings a few years before. At that time, I read a paper upon the subject covered by my present title, and I am glad to have the opportunity now afforded, of bringing before you a riper experience, fortified by an almost complete revolution in the subject treated of. In the grand advance of the science and art of surgery during these few years, the special surgery relating to the treatment and cure of abdominal hernia, has not been left in the rear. Perhaps, aside from that of pelvic surgery, no branch has made an equal advance.

The term radical cure, as applied to the treatment of hernia, has been badly misused for many years, being used as discriptive of operations that were more frequently failures than successes. We have had operations for the radical cure, injections for the radical cure, trusses for the radical cure, until the term had become such an abuse of the truth, that many of us had abandoned its use, as well as hope in its ultimate fulfillment.

WHY WERE FORMER OPERATIONS NOT RADICAL CURES?

We have little time in this age of rapid advancement, to discuss past failures, except to ask why they failed, and our recent experience in this subject, has answered this question, and it now seems strange that we should have remained so long in the dark. It is a repetition of the old story of Columbus and the egg. After he had shown them how, they could all make it stand on end.

I take from my shelves, a treatise on surgery, considered an authority at the time that my medical studies began, and find this sentence relating to the subject under consideration:

"The operations that have been devised for the radical cure of hernia are all founded on one of two principles, viz., the excitation of such an amount of peritonitis in the sac, or its neck, as to secure its obliteration, or the plugging of the hernial aperture by invagination of the integumental tissues."*

In view of such teaching, it is not surprising that there are still many middle aged practitioners, men who have been absorbed in the general practice of medicine, who do not realize that we have left that age of surgical darkness and entered one of broad daylight.

Almost without exception, the early operators felt that the essential step in obtaining a cure for hernia, was the obstruction of the hernial sac, and every means consistent with the safety of the patient, was resorted to, to accomplish this end. There was, however, the time honored dread of approaching the peritoneal cavity or any prolongation of its lining membrane, the peritoneum, which prevented anything really radical being done.

Up to the time of "Riesel," of Germany, few had ventured to make an opening further than the outer muscular layer of the abdominal wall, and after cutting off the sac at this point (considered a rather rash procedure), various methods of closing up the external, or superficial, abdominal ring were resorted to.

Riesel was undoubtedly on the right track when he advocated splitting the aponeurosis of the external oblique muscle, so as to expose the whole length of the inguinal canal, but his operation failed because of the subsequent defective closure of the parts.

Closely following this, was the operation of my eminent townsman, Dr. McBurney, who went even further towards a final success, by opening the canal to the internal ring, clearing it of all foreign matter and tying off the hernial sac flush with the peritoneal surface. The subsequent steps in his operation, however, were fatal to its permanent success. Dr. Marcy, of Boston, had shown us the safety of the buried suture,

*Read before the Virginia State Medical Society, September 1st, 1897.

*Erichsen's Surgery, 2nd American Edition, page 771.

and had insisted upon the necessity of restoring the obliquity of the canal, but the honor must be given to Bassini, of Padua, Italy, for finally supplying us with an operation apparently complete in its technique, and fortified by a simultaneous report of an unprecedentedly large number of cases; an operation, which has up to the present time, been performed upon a large number of persons, with greater safety and a larger degree of success, than any other in the history of the subject.

WHY THEN THE FORMER FAILURES AND OUR PRESENT SUCCESS?

To answer this intelligently, we must for a moment, consider some of the predisposing causes of hernia. In most works on this subject, you will find elaborate discussions upon elongated messentery, muscular relaxation, etc., which, doubtless, all have some element of truth in them, but in the light of recent experience, personally, I am convinced that there is an inherent defect in the muscular structures of man in what should form the posterior wall of the inguinal canal, and that operation which fails to overcome this defect, can not be relied upon to effect a cure.

The lower borders of the internal oblique and transversalis muscles start from Poupart's ligament, and arching over the cord, find attachment in the pubic bone, but do not pass back of the cord. The cord, therefore, traverses an irregular triangular space, bounded above by the lower borders of the muscles named, outside by Poupart's ligament, and the base being represented by the pubic bone. Practically, the canal is unprotected at this point by posterior muscular wall. This triangle forms the weak spot in the anatomy of the parts, and was never taken into consideration in the older operations for hernia, but is now fully overcome, as will be demonstrated later on. That this muscular defect is a serious predisposing cause to the occurrence of hernia will, I feel sure, be admitted by those who have a large experience in the present method of operating, and, therefore, opportunity for observation.

Another cause seldom mentioned, but frequently met with, is the formation of fatty growths, either between the muscular layers, or, more frequently, just in front of the peritoneum, which slip into the canal and act as a dilating wedge. But, again, we have enormously enlarged veins, connected with the cord, which, by their presence, tend to dilate the canal. These are merely mentioned as causes which were never reached or remedied by the older methods of operating. Besides these, there was always the more or less thickened sac, which left as a serous lining in the upper part of the canal, invited a recurrence of the protrusion.

All of the old operations dealt with hernia by remedying the defect as found at the external ring, leaving any defect that might exist in the canal; on the contrary, we now begin our repairs at the internal ring, after every abnormal structure has been removed.

Without further retrospect, we will consider for a few moments our present methods of operating and the results obtained, then we shall be in a better position to answer the question asked by my title.

Among the members of your society, you number some of the most eminent American surgeons, who are, doubtless, familiar with every detail of this operation, and to such, even a brief recital of its technique may be tiresome, but I assume that the larger part of my audience are general practitioners, who have not seen it demonstrated, or who, at least, do not see why this should succeed when so many others have failed. Perhaps I will be pardoned, therefore, for rapidly going over it for their benefit.

A slightly curved line drawn from the anterior superior process of the crest of the ilium to the spine of the pubes, represents the location of Poupart's ligament. The incision for the Bassini operation should be about three-quarters of an inch inside of this line, extending from over the superficial abdominal ring about three inches upwards and outwards. The two underlying layers of fascia should be cut through, revealing the aponeurosis of the external oblique muscle, which will be recognized by its white glistening surface and the direction of its fibres. With the fascia, will be cut the superficial epigastric and superficial pubic vessels, which require clamping, and sometimes subsequent ligation.

At the lower angle of the incision, if it has been properly made, the superficial ring will now be seen, usually with the hernial sac bulging up out of it. A groved director should be slipped under the aponeurosis of the external oblique muscle, at the external ring, in the direction of the canal, and this tissue split by scissors or knife, to a point opposite, or a little above, the deep inguinal ring. You now have the entire canal exposed to view, and you proceed to lift the sac and the cord to which it is quite uniformly attached, out of its bed.

The separation of the cord from the sac, especially in hernia of the congenital variety, is the most difficult step in the operation, and some have failed entirely in its accomplishment.

The cause of failure has been, I think,

due to making the attempt too low down. The separation must be accomplished almost entirely by the fingers, and I have found that, clearing one place on the sac surface and rolling the sac in one direction between the thumb and fingers, while the cord and fascia are held between the thumb and fingers of the other hand, is the easiest way to accomplish it, and that the middle of the canal is the best point to begin.

The hard and wiry feel of the vas deferens should always be borne in mind, as this will lead to the location of the cord in cases of doubt. Having obtained complete separation at one point, little trouble will be experienced in stripping the cord free up to the peritoneal surface and as far down as may seem advisable.

The sac should be opened in every case, as only in this manner can you be certain that it does not contain adherent omentum, or possibly, intestine. One operator has been so unfortunate as to tie a loop of bowel in the neck of the sac by neglect of this precaution. I am in the habit of having the assistant tie the neck of the sac (with cat-gut), while I hold one or more fingers in its neck, thus avoiding possible protrusion under the ligature.

After tying, the sac is cut off outside the ligature, and its fundus stripped out entire, if this can be easily done, If, however, the sac is very large and closely adherent, that part which occupies the scrotum may be left in place, that only, which passes through the canal being removed. Having removed the sac, any other foreign body present can be taken away, and this should include all small growths of fat, which are very common, and prevent a subsequent matting together of the various layers.

The opening of the canal and clearing it of all structures that do not belong there is, unquestionably, a great advance, but it certainly would fail, as it has, were it not for the step in the operation now to be discribed. Mention has been made of the relation of the lower border of the internal oblique and transversalis muscles to the canal, and they will now be plainly seen going just above the cord to their attachment to the pubic bone, and it will as readily be seen what a weak place in the anatomical construction of the parts this is.

The parts are reconstructed in the following manner: The cord being held up out of the way, a blunt curved needle, threaded with Kangaroo tendon, is passed through the lower borders of the internal oblique and transversalis muscles well up towards their attachment to Poupart's ligament. The needle is now carried under the cord and through Poupart's ligament. This suture, when tied, brings the borders of the muscles named, closely around the cord at ths upper angle of the wound, and the muscles are now brought in contact with Poupart's ligament all of the way down to the pubic bone, by continuous suture. We now place the cord upon this new muscular posterior wall, which never existed before, and stitch the divided aponeurosis of the external oblique over it, the skin being closed over this. This differs from Bassini only in the suture material; he using silk instead of the buried animal tendon. But as the latter proves fully as efficient and less liable to form a sinus, it is preferred by most American operators.

WHAT THEN HAVE WE DONE?

1st. Cleared the canal of the hernial sac and of any other foreign body that may have been found there.

2nd. Constructed a new posterior wall, by carrying two muscular layers back of the cord, which are not found there in the normal subject.

The treatment of the case subsequent to the operation is, usually, very simple. All possible precautions to secure asepsis have been observed, and it is expected that primary union will result. After closing the skin by cat-gut, and dusting aristol over the parts, a good firm bandage is applied and this is not disturbed for ten days, unless there is elevation of temperature, or pain, indication that all is not going well with the healing process.

In the two hundred and fifty cases reported by me before the American Medical Association, at Philadelphia, last May, there was primary union in two hundred and seven. In the fifty-five children under fourteen years of age, there was failure to obtain primary union in only one instance, which clearly indicates that in childhood, the ability to resist infection is much greater than in adult life.

In speaking of the result of the operation I shall draw upon my personal experience only. This, however, is fully in accord with the author of the operation and other operators.

One honor I believe I can claim, and that is the largest number of hernia operations, by any method, without a single death. Up to the present time, I have done two hundred and seventy-eight Bassini operations upon patients of all ages and conditions, and that without any dangerous symptoms following in any case.

The ages of the two hundred and sixteen patients upon whom the two hundred and

fifty operations were performed, already tabulated, were as follows:

Under 14 years,	55
Between 14 and 40 years,	98
" 49 and 60 "	47
" 60 and 80 "	14
Over 80 years,	2
Conditions at time of operation:	
Right inguinal,	154
Left inguinal,	96
Double inguinal,	34
Scrotal,	93
Reducible,	178
Irreducible,	55
Strangulated,	17
Omentum excised,	55
Testicle in canal,	9
Ovary in canal,	3
Time of discharge:	
By 14th day,	114
" 21st day,	198
" 28th day,	210
Over 28 days,	6

One patient, a physician, operated upon for a good sized hernia, left the hospital on the eleventh day, and the same night, took a train for Detroit.

Two important points remain for consideration. The dangers attending the operation and the permanence of the cure. Besides my own two hundred and seventy-eight cases, I can, from five of those who have operated most extensively by this method, collect reliable results in over one thousand cases, which give only three deaths, and at least two of these can scarcely be attributed to the operation.

In recurrences, Bassini had seven out of his first two hundred and fifty cases. I have had seven recurrences, three of which have been operated upon, and as the special cause of recurrence was removed by the second operation, there is every prospect of permanent cure, leaving only four actual failures. Even in these four, the patients are in better condition than before the operation. Only two have sufficient recurrence to require the application of a truss. The others are wearing light belts.

My answer then, to the title of this paper, is that we *have* found a "Radical Cure" for inguinal hernia. If any man on this floor wishes to argue against this conclusion, he has for his use the entire history of this subject up to the advent of this operation, because they were all failures. But, I am sure, that even that mass of evidence will not stand up before that which can be aduced in favor of the Bassini method.

A sanitary bible, bound in celluloid, which can be washed, has just been introduced into court rooms.

Placenta Previa.*

By Paulus A. Irving, M.D., Professor Diseases of Children, University College of Medicine, Richmond, Va.

While you may think I have selected as the title of my paper a rather old and trite subject, one about which possibly but little new matter has been advanced of late years, yet it seems to me it is well for us at our annual gatherings to discuss and confer as to the best modes of procedure in the management of many diseases which are termed commonplace, for they are the ones that oftener confront the practitioner, and certainly there is not one in the catalogue of diseases that requires as sound discriminating judgment and as skillful management as Placenta Previa. As this is a kindred subject and one as to its treatment that pertains to the paper of my friend Dr. Glasgow, who has so ably opened this discussion, at the suggestion of your secretary and with your consent, Mr. President, I will offer what little I have to say at this stage of our proceedings. My apology for presenting this subject for your consideration is that I have recently passed through a trying ordeal with a most serious case and one that gave me great concern for several months, which I was fortunate enough though to bring to a successful termination, saving both mother and child.

Placenta Previa is one of the forms of Dystocia which we meet with but rarely in our daily obstetrical work, but when it occurs the life of the mother as well as that of the child, is often at stake, due to the great tendency and often the presence of exhausting hemorrhage. The Placenta in a normal case of conception is attached at the top or fundus, or laterally to the sides near the fundus of the uterus. Fortunately Placenta Previa is a rare complication, according to the most accurate statistics it occurs in one to one thousand labors or, as compiled by others, in one to fifteen hundred labors. It is oftener met with in hospital than in private practice, for the reason that hospital patients, coming from the lower strata of society, seem more prone to this trouble for reasons that will be given further on. While this disease can appear as a complication at any age of child-bearing life, yet most cases occur from the thirtieth to the fortieth year.

The placenta as is well known in a normal conception is attached to the fundus or

*Read before the Virginia State Medical Society, August 31st, 1897.

high up on the sides of the uterus; it is termed *previa* when it fails to attach itself to this portion of the uterine wall, but is attached to the lower segment of the uterus, to that portion of the uterus which not only during pregnancy but after labor sets in is stretched and distended by uterine contractions, the result of inhibitory muscular activity and stimulation. If the placenta is attached to the lower zone of the uterus or in the lower uterine segment, as termed by some, during gestation as the foetus grows and the uterus enlarges and increases in size for the accommodation of the foetus, why, owing to the peculiar abnormal implantation of the placenta, it often becomes detached in part, and gives rise to a more or less flow of blood, due to the placenta being torn away from its attachment. It is demonstrated that in most, if not all, cases of this form of Dystocia that Placenta Previa "originates from the development of the placenta within the reflexa of the lower pole of the ovum" (Hoffmier). Another theory advanced is that it is that of primary implantation of the impregnated ovum low down in the uterus, or even over the os-inte num (Hart); or "that it is the primary grafting of the ovum in the inferior third of the uterine canal" (Winokel). It is further asserted that this condition is most apt to develop in women who have had some old chronic inflammation of the mucous lining of the womb, resulting in a diseased or abraded mucous membrane. "The Hypothesis I would advance is that the human ovum can graft only on a surface denuded of epithelium and that it does not graft in Fallopian tubes, but in some part of the uterus removed by menstruation, hence if the ovum does not meet with any connective tissue surface until it has passed low down in the uterine cavity, why then some form of Placenta Previa will happen." (Hart).

VARIETIES.

For convenience of description this form of Dystocia has been described as Complete and Lateral.

Complete Placenta Previa is where the os-internum is covered by the placenta or as designated by Schroeder and others "a central implantation of the placenta." It is conceded that this form is rarely seen.

Lateral Placenta Previa is where the placenta is attached to the side walls of the uterus extending down or nearly to the os-internum, in some cases overlapping the os. This form of Placenta Previa is much oftener seen, and when you feel the placenta plugging the os, as it often appears to do, after there is sufficient dilatation for your finger to pass into the cavity of the uterus, you may at first think you have a central implantation, when in most cases it is attached laterally and simply a portion of it hangs down apron-like where it has become detached.

Barnes in discussing the varieties of Placenta Previa, divides the uterus into what he terms zones, viz: (1) The superior or Fundal zone; (2) the Equatorial or Middle zone; (3) the Inferior or Polar zone. These zones or divisions of the uterus for the more intelligent consideration of the subject are separated, the one from the other, by imaginary not anatomical lines. The superior zone is the location of the placenta in a normal pregnancy. The equatorial or middle zone is the seat of lateral Placenta Previa. The inferior or polar zone is the seat of the central variety, or central implantation of the placenta.

Lusk, in my judgment, makes the most sensible and rational diivsion of this subject, viz.:

1. Placenta Previa Centralis.
2. Placenta Previa Partialis.
3. Placenta Previa Lateralis or Marginalis.

In the first form you feel or detect on digital examination where the os is sufficiently dilated the placenta, and nothing but the placenta, directly over the os.

The second variety is where you detect the placental membrane as well as the placenta hanging down in some cases over or within the os, which can be pressed or diverted to one side.

The third is where the placenta is attached low down in the uterus, but does not extend as low as the internal os. This is the most favorable form of this disease, and the one from which better results follow.

CAUSES.

The real and exact cause has never been settled. The condition though that tends to this abnormal location of the placenta is oftener than otherwise an old endometritis of long standing, accompanied with a free leucorrhœal discharge; again where changes have taken place in the mucous lining of the uterus from an imperfect involution, resulting from a too early getting up after confinement with all of its accompanying uncomfortable and distressing symptoms, which are so often seen in the poorer classes, necessity preventing their lying in as long as is needed for the uterus to regain its normal and proper size. Also a relaxed, enlarged or misshaped uterus, allowing the ovum to descend too low in its cavity before it attaches itself or becomes inserted. Where a woman has a free leucorrhœal discharge,

whatever the cause of this excessive flow, it often carries the ovum low down into the uterus before it attaches itself to the uterine walls.

For the reasons above given this trouble is more likely to occur in multiparæ or those women who conceive late in life, the per cent. being two or three to one according to some authorities; four to six as recorded by others. Another cause as given for this condition is where abortion has begun and for some reason it is arrested and the villi became attached low down in the uterus in the inferior zone, and at this point fœtal development continues.

Spiegelberg in writing about Placenta Previa, rather predisposing abortion, says: "Owing to the loose vascular connections of the placenta and to the higher blood pressure in the placenta when inserted low down in the uterus, any shock is liable to cause rupture of its blood vessels and detachment." Maintaining also that shock affects the lower portion of the uterus oftener than the upper during the first months of pregnancy, arguing in this way for the above reasons that premature labor is more common in the early than the later months of gestation.

Placenta Previa has a tendency to repeat itself, the cause that produced it in the first instance not being removed makes it likely to occur again. Twin pregnancy it is claimed has a tendency to develop this condition, also fibroid tumors and cancer of the uterine walls.

CLINICAL FEATURES.

The first and most characteristic clinical feature of Placenta Previa is hemorrhage, unaccompanied with pain, which may appear at any time during the latter months of gestation, if not after labor has begun, or just as the child is expelled. In many cases the first warning is a gush of blood and an exhausting hemorrhage, generally without pain, though in some cases I have seen excruciating uterine contractions follow the hemorrhage, which usually checks as suddenly as it comes on, followed by more or less symptoms of shock, depending on the amount of blood lost. Again hemorrhage may be induced by exercise, stooping, straining at stool, fright, anger, any cause that brings about nervous excitement, the act of coitus has brought on hemorrhage under these conditions. When hemorrhage is due to such causes it is termed unavoidable hemorrhage. While in both lateral and central implantation we are apt to meet with this symptom only during the latter months of pregnancy, when, owing to the growth of the child and the corresponding increase in the size of the womb, portions of the placenta are pulled away from their attachments, thus leaving a bleeding surface, the mouths of the blood vessels being left open with nothing to plug or compress them, and hemorrhage results; the amount depending on the extent of the uterine surface denuded.

I affirm that while hemorrhage is oftener met with during the latter days of pregnancy, generally from the thirty-second to the thirty-sixth week, yet it may be the first warning of impending labor, and uterine pains only assert themselves after the hemorrhage is checked. If the hemorrhage is exhausting and has been followed by shock and collapse, the uterine pains though present may be so slight and inactive, that inertia of the womb may result, so that manipulative and instrumental interference has to be resorted to in order to terminate the labor.

Two theories have been advanced as to the source and cause of hemorrhage in Placenta Previa. Most of the authorities claim that the source of the hemorrhage is *uterine*, others that it is *placental*; while it seems to me it might be both, yet from my observation and reading, I lean to the uterine source of hemorrhage.

Now as to why the bleeding oftener occurs towards the close of gestation there are also two views held by different authorities, many of whom are distinguished and advance most plausible theories for their side of the argument. One is that the lower segment of the uterus grows and develops faster than the placenta, which causes its detachment, and we have uterine hemorrhage, which I believe is the true explanation; the other is that the placenta grows more rapidly than the uterus and pulls away from the uterine walls, leaving a denuded placental surface, and we have placental hemorrhage. As I said above, the authorities are divided as to the correctness of these two different views, and it remains for some one in the future to demonstrate which of these theories is the correct one, and which theory we shall accept as the real and true cause of Placenta Previa hemorrhage.

Hemorrhage which is the chief and only practical symptom of this trouble comes usually without pain or warning. I have seen though the hemorrhage followed by profound shock and excruciating uterine pains and contractions, which were only relieved by morphia hypodermically. My limited experience is, that this hemorrhage when it once occurs, returns at stated intervals, and usually with some regularity. In some cases there has been a slight "show" for days at a time, then again practically all

the time, just enough for the woman to wear a napkin, yet the hemorrhage has a tendency to return, and usually with increased power and danger to the patient. The certain and only positive evidence of Placenta Previa is the sense of touch, which can only be demonstrated when the os is sufficiently dilated to admit of a digital examination and you feel the soft sponge-like placenta. It is not wise to resort to this diagnostic evidence unless you are ready to meet all emergencies and to deliver your patient at once. The cervix is much thinner, more richly endowed with blood vessels, which is the case also of the lower portion of the uterus and vagina. At this stage you can generally diagnose the type of the disease you will have to contend with, whether complex or lateral, or central, partial or marginal.

PROGNOSIS.

Every woman in whom this condition is recognized should be watched with eternal vigilance for the death rate is high, both of mother and child, and when both are saved, all parties concerned deserve congratulations and especially the plaudit "well done good and faithful servant" should be given the attending obstetrician, who appreciating the danger ahead calmly but courageously lies down to sleep at night with his armor on, anxiously waiting, fearing that every ring at his bell or knock at his door will bring him the summons that Mrs. ——— is bleeding to death. The danger is great not only prior to and during labor but just as the child is born. Secondary hemorrhage also is likely to result several hours after labor, due to the loss of contractile power of the uterus, hence every woman should be watched for several hours after labor that is complicated with Placenta Previa, for many a patient has sunk into fatal syncope after delivery, brought on by profound shock combined with a weak heart, the result of excessive hemorrhage. Sepsis also adds largely to the death rate. The maternal mortality ranges from twenty to twenty-five, fœtal mortality from fifty to sixty.

TREATMENT.

In considering the treatment of this disease only principles can be laid down, as each case must be a guide to itself, for you will find that many symptoms peculiar to each individual case arise that will demand special consideration, and which may modify to some extent at least any line of treatment that is advocated.

In the beginning I lay down this broad proposition which I feel confident no one will gainsay, that the life and welfare of the mother should first be considered and secondly that of the child. If one has to be sacrificed it must be the infant. In the conduct of a case of Placenta Previa, if it is possible tide the pregnant woman over to the seventh month, and then if it is necessary for the mother's welfare, produce premature labor. In many cases this has been done and the lives of both mother and child have been saved, for at this period unless the mother's system has been reduced and impoverished by sickness and disease, the child is what we term a viable age; many of whom though born feeble and but poorly developed have been reared to a strong vigorous manhood.

Should hemorrhage appear, whether excessive or not, at any period of pregnancy, advise rest and quiet in the recumbent position, unload the lower bowels with a hot water enemata, direct a hot vaginal douche daily, to which you may add any of the antiseptic solutions, such as Borolyptol, Creolin, Carbolic Acid, etc., give black haw in teaspoonful doses every three or four hours to which I often add from five to ten drops of ergot to tone up the uterus, and use opium in some form, usually a morphia tablet one-eight to one-fourth grain to soothe and quiet the patient, and continue it in safe doses until you get its soothing and quieting effect on the general system as well as that of the uterus. If despite your efforts to control hemorrhage it continues and you see the woman's strength failing, the nice and difficult question to decide is, when you are justified in producing premature labor, for if allowed to go on nature often terminates this condition with less risk certainly to the mother, and often to the child, than if manual interference is resorted to. Of course the extent of the hemorrhage, the strength and condition of the mother, and the age of the fœtus *all are points* to be considered in determining the line of treatment that you will pursue. Often after a severe hemorrhage, accompanied with considerable shock, when the Physician arrives the hemorrhage has ceased, he realizes how rapidly and how well nature will repair this loss. By proper treatment the woman will soon regain what she has lost, hence it is a nice point to decide whether to go ahead and precipitate labor, or *wait*, therefore I affirm each case must be a guide to itself, and it resolves itself into simply a question of judgement.

On the other hand if on arriving at patients bedside and the hemorrhage is still going on and the woman's strength is flagging, you then will be justified in resorting to heroic measures. I would first of all tampon the vagina as tightly as I could

with the aid of Sim's speculum, for it can be done much better with the speculum, using for the tampon small balls of absorbent cotton, of course aseptic cotton if it can be procured, and pack the vagina *tightly*. Just here I want to say that when you know you have a case of Placenta Previa your obstetrical bag should be fitted and ready, with every instrument and appliance that you may need for a rapid, aseptic, and instrumental, delivery. In addition you should keep at the patient's house those things needed in case of great emergency, for you can't tell what hour they will be needed and badly needed, for the mother's life may be sacrificed by the delay in sending for them. The tampon usually can be left in from two to twenty-four hours, the pains and hemorrhage being your guide as to when to remove it, unless the hemorrhage persists in spite of it, but even if it does this can't be much if the vagina is tamponed properly, I mean *tightly*. But should the hemorrhage start up afresh after the tampon has been in situ for several hours, you may then know that dilatation of the os has been effected, so then remove your tampon and proceed to deliver your patient as rapidly as possible, rupture the membranes, this facilitates labor, perform podalic person or use the forceps, if necessary, resort to that mode by which you can most quickly empty the uterus and check the hemorrhage.

Suppose you meet with a case where the os does not dilate readily and the hemorrhage persists in spite of the tampon, then you must resort to rapid dilatation, using a steel dilator at first until you can get your finger into the os-uteri, which is the best and safest dilator to use, and then stretch with Barnes' dilators sufficiently to admit your hand. If the placenta is adhered on the margin of the os or laterally, as soon as the head is engaged the hemorrhage will usually cease, so break it loose from these attachments or carry it to one side, rupture the membranes and allow the head to engage. If the placenta is really a central implantation, why you are justified in tearing if necessary through it, break up its attachments and deliver the placenta first and then endeavor to engage the head or whatever part is presenting that it may act as a plug or compress and stop the bleeding. Of course all this manipulating in the vagina must be done as aseptically as possible, or rather the operator must use clean hands, clean dressings and clean instruments.

The tampon is not looked upon with favor by some authorities, they claim that it is slow, that it increases the risk of infection and that there is danger of concealed hemorrhage. They advise you to watch with vigilance and wait for something to happen, leaving nature to slowly dilate the os.

I am firmly of the opinion that if a tampon of aseptic material is used and the vagina is douched with an anteseptic solution and the operator's hands and instruments are clean there is but little danger of infecting the woman, and certainly dilatation of the cervix will be hastened by the presence of the tampon and should hemorrhage occur or continue it has a tendency to clot the blood, which by pressure has the effect of checking the hemorrhage.

CASE.

To illustrate, Mrs. B. conceived about November 20th, 1896. Not until the second month was she aware that she was pregnant, when she suffered slightly from twinges or nausea. To go back through to her former history and habit during her married life; her first pregnancy was a trying one, labor long and difficult, had to be delivered with instruments, resulting in a ruptured perineum, which was not properly repaired, followed by Endometritis.

The second pregnancy was complicated with Placenta Previa; no tendency to hemorrhage until toward the close of gestation, but she went to full term and was delivered without any trouble. The third pregnancy resulted in an abortion about the third or fourth month. The fourth pregnancy was also an abortion. In the fifth pregnancy she went to full term and was delivered of a small child; nothing unusual about this labor. The sixth conception when she became my patient, resulted in an abortion about the fourth month; she made a good recovery.

The seventh conception resulted in the birth of a dead infant about the sixth month, from which she recovered without any untoward symptoms. I give this meagre and incomplete history to show the tendency and by it to prove the causes and theories I have advanced as evidence of this complication, *Placenta Previa*.

I come now to the eighth conception of my patient, which occurred about November 20th, 1896. At the second month she had a hemorrhage, not enough to weaken or alarm her or to give me any concern, but a decided hemorrhage which by rest and quiet soon passed off with a slight flow for several days. At the third month there was another hemorrhage with a slight discharge for several days, which repeated itself with increased force at the fourth month, with but little flow between these dates, which was readily controlled by rest in bed for a few days, the patient doing fairly well for the next month, being practically confined

to the house and most of the time to her room. Appreciating the danger she was in I advised absolute rest and quiet, which she religiously observed.

At the beginning of the fifth month I was hurriedly called to see her one evening, found her profoundly shocked, cold and clammy, with a feeble pulse; she had had a profuse hemorrhage, just *one such* (which was brought on by nervous excitement from having to correct and reprove one of her children who had disobeyed her) and suffering intensely when I reached her bedside with severe uterine cramps, alternating with an excruciating pain in the top of her head, which I regarded as reflex. With morphia one-fourth, atropia one one-hundred-and-fiftieth hypodermically for the pain, and strychnine one-thirtieth hypodermically, and milk and whiskey by the mouth and rectum, and hot water bags to her feet, which were cold, she rallied in about an hour. On digital examination I found the hemorrhage had checked as suddenly as it came; hardly enough discharge in the vagina to stain my finger, cervex only open enough to admit the end of my index finger, which though I found soft and pliable. I gave her Fluid Extract Viburnum Prunifolium in teaspoonful doses every three hours, and morphia as indicated, directed perfect quiet and a liquid diet of milk and Bouvinine, which had formed the greater part of her diet for several months, hoping all the time that labor would set in and terminate my anxiety, but such it would not do. I made preparation to meet every emergency, made my tampons of absorbent cotton, had antiseptic solutions ready (creolin, carbolic acid, bichloride mercury tablets, etc). My obstetrical bag was fitted with every instrument that I thought it was possible to need, even to Gondell's steel dilator for rapid dilatation, sterilized water in abundance, aspiration needles, syringe and apparatus for transfusion, when indicated by loss of blood, to be used in the rectum, deep cellular tissues or in the cephalic vein, depending upon the urgency of the case; also ergot, ergotol, strychnia, morphia and atropia, ice, hot water, chloroform and whisky; all of which I kept in her house ready for use for two months. She soon rallied, spent a good night, and while weak the next morning was comfortable with no sign of hemorrhage.

I made as you will see every preparation to induce premature labor, yet she seemed so comfortable and I was so anxious to tide her over to the seventh month, when I hoped the child would live, that I decided to watch and wait. I left a most competent nurse with her, whom I directed to tampon the vagina and send for me without delay should hemorrhage begin again. She rapidly made blood and in a few days was doing well. A flow about as much as appears during menstruation made its appearance in a few days, and continued more or less, not enough to weaken her though, until the sixth month, when she had another hemorrhage, not so severe as the one that occurred at the fifth month, which was readily controlled. She continued to do fairly well during this, the sixth month of conception, the flow continuing more or less, enough for her to wear her napkin, stopping at irregular intervals for twenty-four to thirty-six hours, and beginning again. This state of affairs continued until July 1, 1897, when she had another hemorrhage, though not severe, which was readily checked. On examination I found the cervix for the first time dilated, and open, and dilatable. I could readily feel the Placenta, not plugging or attached to the os-internum but hanging directly over the os. Fortunately labor set in, dilatation continuing, no hemorrhage. Labor progressed favorable but slowly; in a few hours the head descended and the bag of waters formed, at which time the placenta must have been shoved to one side, for it no longer could be detected. After dilatation was complete which I eased down with a little chloroform because the pain was severe and wearing. I ruptured the bag of waters and labor then set in in earnest, and in a short while she was delivered of a very small and puny infant with only two expulsive pains. As the child was expelled there was profuse hemorrhage, so I as quickly as possible with one hand on the abdomen kneading the uterus, took away the placenta in clots, the uterus being filled with them. The uterus contracted down firmly and well, and no evidence of hemorrhage appeared thereafter. No douches, vaginal or uterine, were used, the patient and bed were simply kept scrupulously clean. She made a good recovery in about a month, with no evidence at any time of Sepsis and is now doing well for her, having always been frail and delicate.

The infant was poorly developed, puny and very thin, succeeded in making it breathe after a minute or two, immediately it was wrapped in absorbent cotton an inch thick, over this several layers of flannel, and was put in a room the temperature of which was kept at eighty degrees and fed upon condensed milk, giving it about two drachms properly diluted every hour and a half. This of course has been modified as the child grew and developed, and it is now doing well. The mother was practically in

bed for three months and lived on a liquid diet all this time.

I expect to be criticised for the conservative management of this case, and feel sure many will say I ran great risk to the mother and that I should have produced premature labor certainly at the fifth month, yet the result in saving both mother and child is the endorsation I offer as the judgment displayed, and I come back to my original proposition laid down in discussing the treatment of Placenta Previa, that each case has to be considered from its own peculiar environments and the treatment resolves itself into a question of judgment at last.

The uniqueness of this case is that it so well illustrates the causes and theories advanced and the picture drawn of this disease. The chief clinical feature of interest I claim for it is, that hemorrhage began the second month of pregnancy, which is very rare, and I at this early date diagnosed *Placenta Previa.*

The Eliminative and Antiseptic Treatment of Typhoid Fever.*

By Dr. M. H. Fletcher, Asheville, N. C.

My attention was called to the above method of treatment of Typhoid Fever, by reading an article on this subject by Dr. W. B. Thistle, of Toronto, Canada, published in the Medical Record, in March, 1894. Up to this time, I had followed several methods of treatment, as laid down in the various text-book, with varying results; always following the recommendation of Neimeyer, by giving good sized or large doses of calomel in the beginning, but avoiding purgation as the disease progressed. In fact, I devoted a great deal of my medication towards controlling the diarrhœa, and the more persistently I treated these diarrhœas, which I was never able to control except by giving opium, the more the nervousness and temperature of my patients would increase. I have learned that the best way to cure diarrhœas, is to give calomel or a saline.

About the time Dr. Thistle's article appeared, what is known as "The Woodbridge Treatment" was brought to our attention. His treatment, also, embodies the idea of clearing out the alimentary track and rendering it aseptic.

At first, I was inclined to be skeptical in regard to the benefits to be derived from these methods of treatment, and while they sounded well in theory, I was afraid of too much purgation, and during 1895-96, used a modified form of the treatment as laid down by these writers. I am satisfied now that I practiced too much conservatism in using purgative medicines, as I hope to be able to prove to you by giving a short sketch of the cases treated by me during this year, both in hospital and private practice; of the fifteen cases reported, ten are hospital and five are taken from private practice.

The benefits claimed are, that temperature has been of shorter duration and more easily controlled; nervous symptoms, delirium, etc., have been milder in character, and the tendency to hemorrhages less. During 1895–96, I had to keep my patients sponged almost continuously, using ice to the head and back of neck freely, and, in a few cases, used the cold bath to control the temperature. During this year I have not used the cold bath at all, except for one case seen in consultation, which is not reported in this list. Only in four cases has sponging been necessary, and then only for a few days in the beginning.

The Woodbridge method of treatment has been subjected to severe criticism by the profession. Notwithstanding the criticisms, the advocates, of the principles involved in his treatment, are increasing daily, and whether you choose to believe that there is anything in it or not, like those who refused to adopt aseptic and antiseptic surgery, you will in a few years be forced to adopt the treatment. Nevertheless, although the claims of Dr. Woodbridge are extravagant, i. e., "That every case of Typhoid Fever can be aborted," his treatment is based on science. As Dr. Thistle says: "The eliminative and antiseptic treatment follows closely upon our knowledge of the nature and *modus operandi* of the infective agent."

If it is true that Typhoid Fever is due to a specific micro-organism, taken into the alimentary canal by food or drink, finding a favorable culture media in the alkaline juices in the region of the caput coli, and a favorable tissue for its operation in the glands, the intestinal follicles and the mucous membrane in the small intestine, and I base all my treatment on this supposition, then, the proper treatment is to destroy these germs or wash them out of the alimentary track. Dilute, wash out and destroy is our text.

I take it for granted that all are agreed that enteric fever is the result of bacterial infection. We will not stop to discuss whether all cases are due to Eberth's bacillus alone, or whether other bacilli, viz., bacillus coli communis, or the common bacillus of the intestine play an important

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part in the production of the disease. Some argue that the common bacillus of the intestine becomes more virulent by being associated with Eberth's bacillus. In any event, the toxæmia is the result of absorption of the product of these germs, together with the putrefactive changes in the contents of the bowel, owing to lack of secretion from the glands of the intestine. The toxine being the weapon of the germ, the treatment based on this conception of the pathology of the disease, consists in first eliminating as speedily as possible both the main culture and the toxine in the intestine; also, the poison held in solution in the different fluids of the body; second, in diluting as much as possible the toxine which is in contact with the tissues, and, in this way, controlling to some extent its destructive and irritant effects; and in the use of substances, if possible, to destroy bacilli remaining in the intestine.

By a free purgation daily, we eliminate the poison, and I have been surprised at the amount of purgation a patient will stand without any appreciable weakness in the force or volume of the pulse. By keeping the bowels cleared out, he can take more fluids into the body, has more desire for food. By free elimination of these germs, the temperature is lowered, the delirium, the drowsiness and the extreme nervousness are overcome. Dr. Thistle compares the poison to that of a drunken man; his extreme weakness and delirium being due directly to the poison in his system. Remove the poison and these symptoms disappear.

My plan has been to give on the first day of treatment, five grains of calomel with one grain of ipecac, divided into five doses given at intervals of one hour each. In twelve hours from the time the first dose is taken, I give one-half ounce saturated solution of sulphate magnesia with five drops of acid arom. sulph. repeated in two hours till free purgation is produced. Usually, the temperature will drop from 104 and 105 to 102 and 103 in the first 24 hours; the headache, pain in the back of the neck, the intense pain in the lumbar region, and pains in the limbs, together with the drowsiness and restlessness will disappear. In former years, it was my custom to give quinine, phenacetin, hyocyamus and camphor to relieve these symptoms occurring in the first week of this disease; but by a free catharsis daily, you will relieve these distressing symptoms, and the analgesic remedies mentioned are unnecessary. I do not remember ever to have given any of the cold tar series of remedies for the reduction of temperature in Typhoid Fever. The second 24 hours and every succeeding 24 hours, thereafter, for as many days as may be necessary to secure five or six free evacuations from the bowels, I give one grain of calomel and one grain of ipecac, in four doses, with one hour interval each day, following with the sat. sol. of magnesia, if necessary. The patient will not require an anodyne or a sleeping draught, his weakness disappears with the lessened toxæmia. We encourage our patients to drink large quantities of water with their medicines, and in the intervals. The loss of appetite and inability to digest food is lessened by free evacuations, by draining off large quantities of fluids from the body. They must be replaced. We exchange for a body-fluid loaded with poison, one of like quantity with the poison left out. Another advantage in giving large quantities of water, we flush the kidneys and, in this way, aid in the elimination.

As to the beneficial effects of antisepsis, I am not quite so positive. Not that I doubt the antiseptic qualities of a great many of our remedies, but owing to our inability to get them in contact with the infective agent, unchanged by the digestive juices and ferments. However, as this is the only rational treatment so far as specific medication is concerned, I give five grains of salol or salicylate of bismuth in powder or capsules, every four hours. I give ten drops of acid mur. dil. every four hours, not for its antiseptic effect, for I doubt if it has any, but for the purpose of aiding digestion and because an acid is agreeable to the patient. If temperature exceeds 103, I have my patients sponged with cold water as often as necessary, and use ice to the head and neck. If temperature persists above 104, I use cold bath.

We have all been taught to give opium and to avoid purgation, where there is a tendency to hemorrhages in these cases, and even to avoid purgation for the fear of producing hemorrhage. According to my present knowledge and ideas of the situation, our teaching has been wrong. This toxine, the product of the bacilli, acts as an irritant, then a caustic, when in contact with the coats of the intestine, and the same argument applies to the danger of perforation; remove the poison, and you will not have the erosion and lesions produced by it. 'Tis true, opium lessens peristaltic action. At the same time, its effect is to distend the bowel with gas, which also increases the tension on the weakened or injured blood-vessel, at the same time holding in contact with the lesion, the decomposed products in the intestine. Of the two dangers, I think the lesser consists in keeping the

bowels open. How frequently have you all observed the temperature rise and the delirium increase, after a dose of opium. You may ask, are purgatives indicated in the presence of a diarrhœa? As I said in the beginning, the only rational and effective way to control and cure the diarrhœa of Typhoid Fever, is by means of calomel, a purgative or a saline. Lock up an irritant in the bowel, and the trouble is not cured.

I will now briefly run over my cases:

No. 1.—Temperature 103 to 104 on first day, treatment continued for 10 days, temperature normal, convalescence prompt.

No. 2.—For first three days temperature ranged from 103 to 105, normal temperature on the 11th day.

No. 3.—Fever continued under treatment (but never exceeded 103) for 21 days, convalescence slow.

No. 4.—Severe case, saw patient on the 4th day, temperature 105-2, normal temperature on the 12th day, had appetite after two days' treatment.

No. 5.—Highest temperature 103, normal on the 14th day.

No. 6.—Severe from the beginning, patient kept on her feet for a week when she should have been in bed, fever continued for three weeks, temperature not exceeding 103 after first two days of treatment. Had diarrhœa from the beginning; notwithstanding this fact, calomel and magnesia were given daily; also, gave large doses of bismuth sub. nit. with 1½ minims of carbolic acid every four hours, for accompanying offensive breath and stomach trouble.

No. 7.—Characteristic typhoid case, loose bowels, red, tremulous tongue, iliac tenderness, diarrhœa, temperature 104, fever continued 12 days, had appetite after eighth day.

No. 8.—Fever continued ranging from 101 to 103 for one week and dropped to 99, continued from 99 to 101 for 10 days longer. Gave, also, bismuth and carbolic acid for an offensive condition in the stomach.

No. 9.—Relapse from Typhoid Fever; came into the hospital after a two months' illness, was convalescing from Typhoid Fever when she had a recurrence of the disease; temperature 104, normal morning temperature 101 to 103 for two weeks longer and had good appetite all the time.

No. 10.—Sick in bed five days before admission; nervous symptoms very severe, temperature 105, had nausea, vomiting and diarrhœa, had greatest difficulty in retaining any food or medicines for first week; temperature controlled during this time with sponging and ice, had normal temperature on the 24th day, is now rapidly convalescing.

No. 11.—Saw patient at middle of the second week; temperature 104.3, diarrhœa, extreme nervousness and deafness, after four days treatment had an appetite, did not require any sponging or cold externally to control temperature after four days of treatment; after three weeks in the hospital, the last week's temperature ranging from 99 to 102, he was sleeping 12 hours out of 24, and had been begging for food for two weeks when he was seized with severe pain at lower border of ribs near the spine, accompanied by chill and followed by temperature 104,8. difficulty of breathing and hemorrhages from the lung; died four days later of pheumonia.

No. 12.—Admitted to the hospital in second week of the disease; temperature 105.2, delirious, bowels distended; delirium left at end of first week in hospital, fever continued four weeks, nervousness ceased at the end of two weeks, except patient was very deaf.

No. 13.—Normal temperature at end of five days, was sent to hospital for Typhoid Fever; diagnostic symptoms were absent.

No. 14.—Temperature on fourth day 104, rather mild case; fever continued 15 days, varying from 99 to 103 for a week longer.

No. 15.—Was transferred to my service June 1st; had been under treatment five weeks; had a varying temperature, 102 to 105, and had been sponged every two to four hours since she entered the hospital; at beginning of my service, had abscesses all over her body, was delirious and had been from the beginning; developed acute mania after four weeks under my care; after giving all the anodynes in the list, and in as large doses as was safe, we could not quiet the patient, and, fortunately, for the other inmates in the institution, her friends offered to take her out; the mania continued two weeks; no more anodynes were given; the mania disappeared as she grew stronger, and she is now convalescing slowly, but is not able to walk across the room, after an illness of more than three months.

SUMMARY.

Give free purgation with calomel, magnesia, C. C. pills, cascara; anything that begins at the upper end of the alimentary track and makes a clean sweep.

Give water in large quantities and at frequent intervals.

Give dilute hydrochloric acid for its effect on the stomach and digestion, and it is agreeable to the patient.

Give bismuth and carbolic acid if breath is very offensive and we have trouble above the ilium.

Give one drachm doses of sat. sol. of

chlorate of potass. if you have symptoms of ptyalism, although I have had no symptoms of this kind.

Give salol or salicylate of bizmuth in capsules or powders, 5 grains every four hours; avoid tablets of any kind as they will in one-third of your cases, pass out of the bowel undissolved.

Give food liberally; milk first; if milk is not digested by aid of peptogenic powder or lime water, and is otherwise objectionable to the patient, give butter-milk; chicken broth, the broth of one chicken for each patient daily; the juice of lean beef, or any of the animal broths. Liquid peptonoids have not found favor with me this season.

It may be argued by some that our fever often aborts at the end of 10 to 14 days, under any form of treatment or by simply following the "let-alone" plan. I have never had a series of cases of this kind, where sponging, ice and even cold baths were not required to control the temperature. To be sure, we have mild cases where only a small amount of poison is taken into the system, and I am quite sure that I have seen one patient this year, who suffered from Toxæmia of Typhoid, who had all the symptoms of Typhoid Fever except the rise of temperature, and symptoms continued two weeks. I also advocate the plan of flushing out the lower bowel daily, although, I believe, under ordinary circumstances, we cannot pass fluids above the colon.

Diabetes Mellitus.*

By J. A. Reagan, A. M., M. D., Weaverville, N. C.

I have chosen this subject because no member, so far as I know, has written upon it; and also that we may discuss it, if, perchance, some valuable suggestions may be made that will give us some clearer light on its etiology and treatment.

As to the cause of Diabetes Mellitus there have been, and still are, different opinions entertained by the most eminent of our noble profession. Its cause has, by some, been attributed to the liver, while others, equally eminent, contend that this theory is not correct, as the liver has been examined, after death, and found healthy, and not containing an abnormal quantity of glucose. Others have attributed it to the pancreas, and said the functions were over-active, which caused too great a flow of pancreatic juice which changed the starchy matter into glucose. Latham, and others, take a different view, and think neither the liver or pancreas is the cause, but that the muscles are the cause, or source of the sugar in the urine and blood. Again it is said that the nerves is the origin of the disease. This is held and advocated by many of the first men of the profession.

But whatever may be the cause of Diabetes Mellitus, we must bear in mind the fact that the glucose in the blood acts as an irritant poison that invades every tissue of the body, which predisposes to inflammation, especially of the lungs and kidneys. We may not agree as to the cause of the disease, or the organs at fault, yet we all know there are exciting causes, which some attribute to an excessive use of sweets, starchy food, beer, cider, or champaigne. Some medicines are accused of exciting the increase of sugar in the system, such as opium, chloroform, and the bromides of potassium. Some persons from their idiosyncracies are more liable to the disease than others, hence certain families suffer more than others, and are said to have inherited the disease. It is not the over-worked physical laborer, of the hard working class who is more liable to an attack than other laborers, but the mental strain and anxiety of the professional class, hence some have concluded that the physicians are more liable to an attack of Diabetes Mellitus than any other class. Those who advocate this theory attribute the disease to an over-strain of the nervous system.

The amount of water passed in twenty-four hours is sometimes enormous. Dr. Thomas Watson, in his lectures on the practice of medicine, says: "Cases are recorded by writers of credit and veracity in which seventy pints have been discharged in that time." It is not the amount of water alone that constitutes the disease, but the honey, as the literal translation of the Greek word means, which is in the water and the system. The amount of sugar in some cases is also very large, running up to one-sixth, or even one-eighth per cent. The great effort of the profession seems to have been to lessen the amount of sugar, instead of removing the cause; and in order to accomplish this they recommended strictly the use of proteid diet. The error in this practice has been shown by several investigators.

Dr. E. L. Munson says: "The sugar decreased for six or seven days, and then increased regularly nearly up to where it was when he began the proteid, or meat diet. All the time the proteid diet was used exclusively the patient lost flesh, and became quite weak." He found also that this diet produced dispepsia, neuralgia, and vertigo —his mind wandered considerably. He

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finally became depressed, and delirious, and lost his appetite. He then placed him on a mixed diet, and says: One month after employing a mixed diet the patient finds himself subjectively better every way. He has gained in weight and muscular power, and the previously marked cerebral symptoms have almost entirely disappeared. Headaches and vertigo, which were formerly almost constant under the proteid diet have nearly disappeared."

After thoroughly investigating the effect of the diet system Dr. Munson says: "In regard to diet, as has been shown, a strictly proteid diet, instead of removing, may even increase the dispepsia in a true diabetes. Nor in advanced cases will it be efficacious in its only object, the disappearance of sugar from the urine. If the effect of a rigid proteid diet have been delayed it will only be necessary, in this connection, to state that a purely proteid diet should under no circumstances be employed. Food of all varieties, provided they are nutritious and wholesome, should be allowed, although, of course, no excess in eating should be permitted. Moderate amounts of carbohydrates in the form of bread, oat meal, or rice should by all means be encouraged." He also recommends exercise and cheerful society.

Dr. Forestier, physician at Aix-les-Bains, says: "The point I wish more particularly to impress is the diet used, and the reduction following while using the mixed diet."

Prof. Finkler used kneeding in fourteen cases, and says: "The diet at the same time was mixed. The result on the whole was favorable, the sugar decreasing, and the bodily weight increasing."

Some physicians travel on the old track, and fear to introduce any treatment that would be criticised by others. So far as I am concerned, I have believed for years that Diabetes Mellitus carries off patients fast enough without starving them to make them die sooner, consequently what few patients I have had with this disease I gave them a mixed diet, and found they improved faster than they had done under others who used the proteid diet. It is known to the profession that no single diet will sustain the whole system—milk comes nearer doing so than any one diet. Those physicians, who believe so strongly in the starvation treatment, must feel that Dr. Munson's experiences ought to have kept the sugar decreasing, instead of increasing as it did, and that it should have increased instead of decreased under the mixed diet. Even in health a man is not able to keep up the equilibrium of his metabolism on purely a meat diet. He could not live many years by so doing, it is much worse in sickness when a wasting disease is helping to carry him off. In beef the proportion of nitrogenous to the non-nitrogenous food is as one to seven-tenths. Consequently meat would have to be increased to such an extent that he could not digest it, therefore, all the evils arising from indigestion would follow. Remove all carbohydrates from the food, the appetite may for a time increase, but the muscles will decrease. Man can not live by meat alone, he must have some carbohydrates mixed with it.

Prof. Oppolzer says: "The diet can exert no direct influence upon the disease itself; it is only able to prolong life." I think if he had said shorten life he would have come nearer the facts. While many physicians cling to the meat diet, and push it until the patient dies, the question naturally arises, is it best to starve parts of the system in order to give some other part a temporary rest, without any hope of curing the patient?

Mr. Gregory obtained, by means of an emetic, the digested food from the stomach of two men, who had dined two or three hours before. One was healthy, the other had diabetes. In each the food had been the ordinary food of the hotel. Applying the ordinary test, yeast, he found the vomited matter of each fermented.

Dr. Thomas Watson, in his lecture on Diabetes Mellitus, after describing the symptoms, the experiments, the tests, and the treatment, says: "I dare not affirm that diabetes, although it seems merely a functional disorder, has ever been cured." Yet many others, since his day, have reported many cases cured. Tuberculosis was once, by the best physicians, pronounced incurable, and now the best writers put the recoveries at thirty-three per cent.

I saw in the dissecting room of a medical college, of repute, the dead body of a lady who had died of typhoid fever, who twenty years before had consumption, and was cured by one of the professors of the college, who had obtained permission to examine the lungs. Her lungs were sound, and showed sicatrices where they had healed. So we hope the medical profession will, by perseverance, combined with science, be able to tell the cause, and then find a treatment that will be equal to that in tuberculosis, and that we will not give up a case of Diabetes Mellitus, and say it is incurable. The system must be regulated so as to bring about a natural action of the organs involved, especially, in my opinion, the nervous system should be closely watched, as it plays an important part in the production of the disease. While a proper diet is commendable, as in all sickness, yet a proper diet in diabetes, in my

opinion, is a mixed diet—not proteids alone. It is remarkable the number of medicines that have been recommended and tried in this disease—many of them of entirely different therapeutic action. Opium, arsenic, and several of the acids.

Dr. John Day recommends peroxide of hydrogen, on the principle that the sugar has a heating power—a tendency to burn up the vitals by degrees, creating great thirst.

Guyot-Dauncy recommends citrate of soda, and professes to have cured several cases by that treatment.

Prof. Bouchardat says: "Dieting patients is only paliative, but recommends exercise, even if forced, in open air." He says he has had good success from this treatment.

Von-Holst recommends glycerine, and claims success in its use.

Dr. McCharteris reports success in the treatment of Diabetes Mellitus by the use of pilocarpin.

Dr. George W. Balfour reports several cases cured by the use of lactic acid internally.

Dr. Richter recommends emetics, and says several cases have been cured by that means. He gives a case where an emetic brought up a great quantity of bilious matter, and says I can say of a "truth that the next morning there was not a vestige of diabetes, or any other complaint present."

When I read the opinions and recommendations of the most prominent physicians, who have passed away, and then study the opinions and treatment of the present time, I am still at *sea*, and feel that the age and learning of the present, demand that we should more thoroughly and scientifically investigate its étiology—the effect on the different parts of the system, and be able to scientifically treat the disease, and not be drifting longer on the vast ocean of doubt and uncertainty. Dr. Munson certainly deserves honor for patient labor in that direction. Let others take it up where he has left it, and work out the cause, effect, and proper treatment.

I have had but few cases myself; some got well, and some died. The most successful treatment that I have used was to regulate the system, and try to keep it in as good condition as I could, watching carefully the stomach, bowels, liver, and the nervous system, and the kidneys. I allowed a mixed diet, mostly milk, with bread and meats, and gave belladonna and nux vomica or strychnia internally. I prefer this treatment to any I have ever tried. But from long experience, and tolerably close reading, I conclude that the greater the number of the different kind of medicines recommended, and used in any disease, the less reliance is to be placed in any one of them. It shows a want of confidence in the treatment of any disease when the profession recommends so many kinds of medicine in the treatment of the disease.

How to Live Long.

By Robert Hunter Dalton, M. D., Tocoma, Washington.

There is one very important thing, remarkable in the progress of a man's age, though not apt to be appreciated by physicians, which involves the chance of a ripe old age, and that is the gradual weakening of digestive power after reaching the meridian of life. This, however, is not always clearly manifest for two or more years afterwards, especially among those who have been temperate in early life, as their bloom of manhood is not so easily faded by the weaving of time. Nevertheless, the disability is ever prominent before reaching the turning point of seventy years, when all men must begin to wear the habiliments of old age.

In youth, and all the period of young manhood, nutriment to repair the waste of active life and to supply the demand of continual development is actually necessary and indispensable, and, therefore, nature provides most ample means of digestion and assimilation, and if over-indulgence happens to threaten a morbid condition, the powerful energy of the stomach and bowels is ever ready to cast out the excess by spontaneous purgation or emesis. But when this energy is failing in after life, then expulsion begins to prove more or less difficult or dangerous, as all physicians of experience know; hence the crude ingesta must linger along the devious alimentary tract in a state of putrefaction, generating toxines to be absorbed and to poison the tissues of the body, and, at the same time, liable to develop some fatal acute or chronic disease.

And then again, equally important is the fact that, in youth and young manhood, nature provides a redundancy of vital energy to promptly repair any damage done by excessive indulgence, while the mature and more aged violators of her law must linger in a state of exhaustion, being subject in the meantime to the baneful influence of all deleterious environments that tend to disease, acute or chronic. And we may not wonder at this sad predicament of the aged, when we consider that the command to "multiply and replenish the earth" when

man was created, carried with it a prurient appetency, enduring and irresistible, in order to make sure perpetuation of our species.

And here we have a clear exemplification of the reason why the limit of human life has been always held to be "three score years and ten;" and doubtless in the absence of these two palpable causes of premature decline, the limit would now be universally recognized at four score years.

These reflections suggest the absolute necessity of looking out for a method of living by which mankind may have an opportunity of reaching and passing through the most peaceful and enjoyable part of life, when animal appetites and passions of every kind are lulled forever, leaving the mind—that God-like essence of being—to rise up free to contemplate the divine mysteries of human life; to investigate the problems of science generally; to dwell in luxury among the charming beauties of nature; to feel the sweet gentle glow of posterity's love, and to hold communion with friends and dearest kindred long loved and lost. The single life of an octogenarian seems to stand as 1 multiplied by 2.

Bearing in mind that the digestive organs do become enfeebled as age advances, we cannot escape the conclusion that a corresponding decrease of pabulum is necessary for the maintenance of health, and, if that rule is not observed, a morbid condition must, sooner or later, supervene. How to live in accordance with digestive energy may be illustrated as follows:

It is understood that a youth will digest his dinner in three hours, a man at the age of forty-five in five hours, and at the age of seventy certainly not less than six hours, the stomach requiring a proportionate length of time for recuperation after digestion is complete; and this proposition suggests the way of compromising the difference: Let the old man omit his lunch at mid-day, or if conventional restraint is in the way, let him simply take a cup of tea, coffee, or milk, with only a few bites of bread to tickle his nave, and provoke an appetite for his pipe; and then at his principal meal at evening, let him be sure to dine moderately, and no surplus of undigested food will lie in his stomach during the night to disturb his slumbers with nonsensical dreams, or clog his bowels with a putrid mass to send forth poison, endangering his life.

Meat should never be eaten but once a day and then in moderate quantity at the principal meal, as the debris resulting from the digestion of meat is not easily eliminated by the emunctories, and when taken in excess it is likely to crowd the viscera with noxious elements hard to remove. However, this rule is not so strictly applicable to the man of daily labor, as his exertions may easily work off the surplus.

But ingestion is not the only thing to be considered, for whether a man labors or not he must take some daily exercise to preserve his vital machinery from rusting out, and as a considerable part of all populations are more or less subject to a sedentary mode of life, they must look out for exercise similating labor. Once or twice every day, while standing out in the open air, let the sedentary man cast his arms with force over and around his head, counting the gyrations up to 75, and then reversing the same 25 times, when he will begin to feel a decided glow equal to the effect of walking a half mile or more; and once or twice every week, for the purpose of cleanliness, as well as circulatory revulsion, let him take a tepid bath, using a stiff brush freely; or if the bath is inconvenient, strip and scrub the entire surface with an ordinary harsh scrubbing brush for an hour. All this becomes pleasant when the habit is formed, and the want of exercise is scarcely felt.

Of all hygienic methods for sedentary people, that of keeping the bowels regular should never be neglected, for the reason already alluded to—auto-infection, the source of diseases peculiar to civilization, for if savages are ever afflicted with constipation, the fact is not known to our profession, and as to animals, they drop their ordure on impulse wherever they may be, offering no foundation for the habit.

Thanks to the chemists of our period, we have an abundance of pills and parvu'es to overcome the habit, if we were not warned by our books and teachers against their employment as a remedy for constipation. Then how shall we deal with the habit? We must either find out some harmless way of using purgatives, or resort to a course of diet that few active individuals can regularly adopt, as they are frequently compelled to take their meals abroad, where the rye mush or unbolted wheat bread is not provided: thus losing all they have already gained by pursuing that plan. We, therefore, adopt the former method, professing to have discovered that harmless way of using purgatives simply by observing physiological digestion. All food is purgative; otherwise, everybody would be constipated and defecation would be impossible; and yet no one has ever been injured by its normal action. Now, if we contrived a purgative dose of vegetable composition so minimized as to equal the strength of a daily supply of food, and take it every night,

followed by a copious draught of cold water in the morning before breakfast, we may certainly expect a natural and complete evacuation every day. A pill composed of rhubard 2 grs., aloes and jalap, each, 1 gr.. ipecac and cast. soap, each, ½ gr., sulphate of strychnia 1-90 gr., will answer the purpose; or the following, which is a little more active; aloin gr. 1-6, ext. belladonna gr. 1-8, ext. cascara sagrada gr. ½. We emphasize the draught of water before breakfast, inasmuch as it favors expulsion of the fecal mass by its bulk and deobstruent action, diminishing the amount of medicine in the pill necessary to move the bowels.

The writer of this is intimately acquainted with a physician, now 92 years old, who has made it a rule to take one of these pills every night for the last 60 years, with no injury whatever.

The Differential Diagnosis Between Malarial and Typhoid Fevers.*

By J. F. Jenkins, M. D., Tecumseh, Michigan.

The difficulties in making a diagnosis between malarial fever and typhoid fever are in many instances very great, from the fact that typhoid fever presents itself under so many and varied conditions, the type at one time being very marked, at another time assuming many of the phases of malarial fever. Sporadic cases occurring in country districts and very generally in villages are not infrequently diagnosed malarial fever, and doubtless the deaths reported to local boards of health under the head of malarial fever are usually due to typhoid fever.

Dr. Osler states in a paper recently read by him, that "North of Mason and Dixon's line physicians are prone to diagnose malaria for other diseases; south of the line they are more prone to diagnose other diseases for malaria; in both regions it is a source of greater error than any other affection." There are many localities in this State, as well as other States north of Mason and Dixon's line, where malarial fever still prevails, especially during the autumnal months and it is in these sections where it is so frequently found a difficult question to determine whether the patient has malarial or typhoid fever.

In each and every case the source of infection should be thoroughly investigated, and in many instances such an investigation will give material aid in arriving at a correct diagnosis.

*Read before the annual meeting of the Michigan State Medical Society.

It is seldom that typhoid fever commences with a pronounced chill, while malarial fever is usually ushered in with a chill, more or less severe, followed by high fever; sometimes typhoid fever commences with a distinct chill, that is with a shaking chill, but the temperature is not so abrupt, never reaching 103 to 105 degrees as it usually does in malarial fevers within the first twenty-four or forty-eight hours. The development of typhoid fever is in the large majority of cases slow and insiduous; there is a feeling of weariness, general malaise, some fever which increases day by day, and under these conditions quinine may be administered in antiperiodic doses which may lessen the temperature, but like the annual overflow of the Nile, it is certain to again make its appearance. In malaria, epistaxis is rare, while in typhoid fever in its incipient stage, it is frequently present, especially among the young, but seldom occurring in patients after the age of fifty. In malarial fever the pulse rate will not be very much increased by taking the patient suddenly from bed and placing him in the upright position, while in the incipient stage of enteric fever the pulse rate is greatly increased by such a change of position. In the early stage of typhoid fever this alteration of position will frequently assist in determining the fever.

Where malarial fever prevails, and it is a question whether or not, the infection is the product of Eberth bacillus or the hematazoa of malaria, ten grains of quinine given every three or four hours until thirty grains are administered, and this amount repeated every twenty-four hours for two or three days, will materially assist in differentiating the disease. The infection of malaria will be destroyed by quinine, while in typhoid fever it may reduce the temperature, but it will soon reappear. Among the lagoons of northern Indiana more than a quarter of a century ago, the writer folllowed out a similar plan to the one above mentioned, and frequently found that instead of malarial infection, the only factor in the case was the infection of typhoid fever. These fevers commonly had all the characteristics of typhoid fever, excepting that they were invariably accompanied with profuse prespiration. The local physicians termed them "slow fevers," and finally they assumed the name of typho-malarial fevers, but post mortem examinations whenever made revealed the pathologic lesions of typhoid fever.

The importance of making an early diagnosis in typhoid fever is generally admitted, because the *hygienic* and *dietic management* of the *disease* is *absolutely* of *more im-*

portance than internal medication; the lesion in the alimentary canal often leading to fatal results even in apparently the mildest form of enteric fever.

Within the past few years the microscope has made us familiar with the typhoid bacillus, and bacteriologists have made us acquainted with its natural history, its growth, its favorite habitate for development, how it behaves within and without the body, its most favorable conditions for propagation, and how to avoid and destroy the bacilli *without* the body. These facts are still leading us to more certain methods of diagnosis, and instead of depending upon symptoms we may look forward to methods which will be more definite in making out a differential diagnosis of fevers.

Ehrlich's test, or what is termed the diazo-reaction, appears to have a limited value. This test, which it is not necessary to describe here, responds to after the first week of typhoid fever; it may be used to determine whether the infection is due to the Eberth bacillus or the hematozoa of malaria.

Another means of diagnostic import in suspected cases of typhoid fever is to examine the stools for the Eberth baccillus,and when found it is evident the patient has enteric fever.

The serum diagnosis of typhoid fever has been undergoing investigation during the past year, and its practical usefulness is still an unsettled question. The difficulty in Johnston's or Widal's test, as well as others above mentioned, is that it requires an expert, and hence they are almost useless in general practice.

The discovery of the hematozoa of malaria by Laveran is at least next in importance to the discovery of the tubercle bacillus by Koch. It has given the medical profession an intelligent concept of malarial fever in its various manifestations, and the literature on this subject has already been cleared of an immense amount of rubbish which has enveloped the medical practice of the past.

The combined infection of Eberth's bacillus and the hematozoa of malaria seldom occurs, excepting that it may still linger in the mind of some medical hay-seed, who, Rip Van Winkle-like, continues to hold fast to the opinion that malarial fever develops into typhoid fever, or is in some way dovetailed into it. On this question permit me to quote Doctor Osler, who states that, "Among the one thousand cases of malaria and the five hundred cases of typhoid fever which have been at my clinic, almost every one of which has had a blood examination, there has been but one doubtful case of double infection."

Double infection so infrequently occurs that it will seldom enter as a factor in the differential diagnosis between malarial and typhoid fevers.

"Some More Thoughts."

By Ben H. Brodnax, M. D., Brodnax, La.

I read with some interest my brother Register's comments. Reference to the article will show that I referred to the page from which I drew my criticisms; at the same time I am always willing to be corrected when wrong, and to make amends for said wrong; also I do not wish to be too persistent.

Some years ago, when I proposed to treat burns and scalds with pure undiluted carbolic acid, declaring that it instantly stopped all pain, and that healing of wound set up almost instantly, I was asked, "Doctor will not a drug that will burn normal flesh treat a raw surface more cruelly?"

Twenty odd years ago, when I cured up an old sore of four year's standing by covering it with fresh chicken's blood, with a few drops of carbolic acid added to keep it fresh, a brother doctor remarked, "You'd better quit monkeying with such tricks, you will get yourself in trouble."

Again, when I proposed to abort a chill with acetanelide, I was told, "better quit it, or you'll kill one of masser's best niggers." So it goes.

I'm getting used to being told that I am mistaken as to what I am treating. Page 180, August issue of "The Charlotte Medical Journal," says: "The doctor says quinine failed in 40 per cent. of his cases of malaria. This large per cent. of failures suggests the possibility that the doctor's diagnosis was incorrect, and he was giving quinine for a fever that was not malarial." See? Also it says: "Further it is impossible to arrive at any correct estimate as to the therapeutic value of antifebrine in malaria, unless its influence on the parasite is studied microscopically." Is that so? One thing at a time. If a man hands me a bunch of grapes, I must 1st ask, "did they grow on a vine or a tree? show me the vine, now the place from which you pulled them." *Then* I can say, truly, "*it is* a bunch of grapes," not otherwise, because previously I was *not* sure about it."

Mistakes *do* occur even in the exact science called "Surgery," as I read a short time since that an eminent French surgeon had removed a tumor from the abdomen of

a woman, and was horrified to find it was a gravid uterus. Yes, mistakes do occur. But one would suppose that a man who had studied at the bedside, for 20 or 30 years, the prevailing, every day, disease of a country, would hardly be mistaken in diagnosing a common malarial attack. I would be tempted to set such a man down as not "*much* doctor." The symptoms of malarial attack are so pronounced that, to my mind, there is hardly a possibility of a mistake.

In the matter of the second quotation, "examination of the blood," I fail to see what bearing that has on the "therapeutic value of antifebrine in malaria." Therapeutics is the use of medicine in diseases. Also, I fail to see what bearing the bug theory has in the matter. It was a bad day when medical men commenced the wild chase after the bugs. I once heard an old fox hunter curse his dogs bitterly for quitting the fox-trail to take off on a fresh rabbit track.

Has not the bug chase come to about the same pass? "The bacillus" has aided us *not* much in the cure of disease. The matter must come down to the *practical trial* of any medicine, i. e., what does it do for the trouble? not how or why.

The bacillus may be there, but does it give us any clue to treatment? It has been asserted by scientists that the amount of almost any medicine necessary to destroy the bacillus, would kill the patient. We must stop its work by starving it out.

In fact, if a man should read all of the variable literature on the microbe theory of disease, he would be worse "dumfounded" when done than when he commenced. Take the bacillus of typhoid fever. You examine the blood and find them. What then? Why you think you have typhoid, but are not sure because it is said these microbes are often found where typhoid symptoms do not show up in the patient, and to explain we are told the pabulum is not there, or they are not numerous enough to produce the disease; also, that the bacillns itself does not produce the disease, but does produce or manufacture something that does do it; and also, it does not manufacture this something unless they are poisoned by the pabulum and rendered sick thereby, &c. Oh! heaven!

When called to a case where a man has had a chill, which has passed off with a sweat, with a greater or less number of hours of freedom from fever, I am told, "you are not sure it is malaria unless you have examined the blood microscopically and found the plasmodium." Well suppose I have examined the blood and found the said bug. If we allow the reasoning of the scientists to be correct, am I any more sure then? Really it makes no difference to me whether I know it is there or not, I'm not sent for to make examinations of the blood, and would be afraid the patient would tell me "quit your monkeying and give me something to ease me." There might be some doubt if, as the patient sometimes says, "I had no chill, the fever just rose dry so."

We have here a form of congestion followed by only a slight chilly feeling, sometimes shows itself only in a "blue look" of the finger nails, a slight paleness of face, or coolness of the end of the nose. We "backwoods" call this a "dumb chill," and the fever following often runs for 20 odd hours, up to within a few minutes of the recurrence of another of these same dumb chills. A light perspiration only follows.

Right here is when some are mistaken as to whether it is not typhoid, or a continued, fever, and may claim that quinine has aborted a case of that kind of fever.

Well that is only another mistake, or you might call it ignorance of the ways of this many sided protean trouble called "malaria."

There is one treatment that will tell the tale. Calomel to clean out the filth from the bowels, a dose of acetanelide to abort the chill or fever, and acid iron tonic to tone up the blood. This is the test, and like some other things called tests, it does not fail in my hands. As to the "return of the chills in 6 or 8 days," commented on, if treated by this plan I have rarely (I might say *never*) seen it return during that season. I claim that the immediate causes of chills and fever are, 1st. a dirty digestive tract; 2d, therefrom poisoned blood; 3d. thereby disordered nerve centres. Remove the cause, purify the blood to prevent the disordered nerve action, and your patient will get well to stay well. It is surprising what an amount of filth can remain in the system and the man live. One remarked to me once, on whom calomel and podophyline had done its good work, "I am surprised that I am alive, as I must have been plum rotten inside." This is *the basis* of malarial trouble: let the plasmodium *be or not be*, and our duty is to remove it by the surest, pleasantest and quickest way possible.

To the assertion that the quinine route, with its repetition of a bitter, unpleasant, drug, and enhanced after effects is pleasant very few will allow. That it is quick, a good many deny. That it is certain in curative effect I positively dissent.

Reference to page 180 would have one to think that the "generally expressed opin-

ion" of the profession as to its preventive influence was that it was about a *failure*. Now as to results, the "new idea" gives better results, quicker and with no dangerous sequelæ, and they are lasting. Rerfer to page 182, 2d column, Dr. F. R. Millard gives an idea of what a *single dose* of quinine will do under certain conditions.

At last, it is a choice between a dangerous, unpleasant, bitter drug, which grants no immunity even if it checks the disease, and a pleasant, reliable, lasting treatment. It remains for the doctors to make their choice. Give the new idea a fair, impartial test, and my word for it, you will use gradually less and less quinine. Dr. Yarbrough of Indian Territory, writes me, under date of August 1st: "I have pushed its (acetanelide) use in the treatment of fevers, and must say that when used with its congeners, salol, &c., you can lessen the quantity of quinine to *nil*." This is the verdict from all of those who have given it an honest trial.

One more thought. I am now every day, and some days three to five times a day, dispensing the "new idea" treatment with success in every case—no relapses, no hæmaturia.

Post-Climacteric Conditions that Simulate Advanced Uterine Cancer.*

The writer commends the teaching that irregular hemorrhages and sero-sanguinous discharges, whether occurring during the parturient age or long after the menopause, are good and sufficient reasons to suspect malignancy.

We carefully watch for early symptoms and by their detection occasionally succeed in removing the disease while it is still local. On the other hand, we sometimes are caught off our guard when confronted by post-climacteric cases, presenting all the classical characteristics of advanced malignant disease. Without the same circumspection exercised in the early stages we thoughtlessly pronounce the case beyond remedy or hope; specifying even the extreme possibility of life.

The text-books are deficient in not sounding a note of warning against possible errors in the late stages. The so-called classical symptoms may be due to other (non-malignant) conditions of the genital tract.

Owing to effacement of the vaginal portion of the cervix in old age, the differential diagnosis is in most cases limited to corporeal diseases of the uterus. Before the diagnosis of corporeal cancer can be made, other diseases must be excluded.

The conditions which are likely to stimulate advanced cancer are the following:

1. Senile Vaginitis.
2. Foreign Bodies in the Vagina.
3. Gangrenous Fibroids.

Atrophic, Senile, or Post-Climacteric Endometritis.

5. Post-Climacteric Pyometra.

Of these conditions the last is especially adapted to lead to errors. The writer gives the details of a case of pyometra occurring recently in his own experience, and submits abstracts of five more or less similar instances found scattered in the literature of the past seven years. In all these cases either a positive or provisional diagnosis of corporeal cancer had been made.

In conclusion, the author calls attention to the singular fact that in the presence of the essential predisposing conditions—age, low vitality, cicatrical tissue, adhesions, chronic inflammation and irritating discharges—cases of transformation into malignant disease are either unknown, or exceedingly rare.

*Abstract of a paper read before the Amer. Association of Obstetricians and Gynecologists at Niagara Falls, Aug. 17th, 1897, by M. Rosenwasser, M. D., Cleveland.

Endarteritis Deformans.

In the August number of the Texas Medical Journal, in speaking of this disease, Dr. Jackson says: When it occurs not in connection with syphilis, alcoholism, lead poisoning and Bright's disease—the prime ætological factors—that it may be regarded as an omen of approaching general decay—senility.

If the disease has its origin in some one of these constitutional taints, the case may be discovered at the age of fifty; while if it should be of atrophic origin the patient is probably twenty years further advanced in life.

The heart, due to overstrain in forcing heavy blood through tortuous, thickened and inelastic vessels, is in all cases hypertrophied, soft and irregular in rythm; the arteries expand deliberately, and are filled with difficulty; therefore the trace of the sphygmograph is short, slant and blunt. The vessels are hard, jerky and roll under the finger. The proliferation of cellular elements on the *tunica intima* obstructs the flow of blood by contracting the lumina; thus embolism and gangrene may be induced. This cellular substance may degenerate into a soft, pasty, atheromatous mass, and may be swept away by the blood—another means of producing thrombus, embolism and gangrene. This same substance may degenerate into calcareous rings around

the smaller vessels and calcific plates in the walls of the larger ones; thus their sharp edges, when jutting into the blood stream, may collect fibrin and effectually plug the vessel—another means of embolism and gangrene. The friability of the intima, media and adventitia renders the vessel subject to sacculation, dilatation, anurism and rupture. Structures supplied by a sclerosed vessel suffer inanition; thus cerebral softening, nephritic, cardiac and other changes are superinduced.

Patients should remain quiet, attempting no muscular strain; should avoid copious drinks of all manner of fluids as tending to hyper-distend the arterial tree; should eschew heavy nitrogenous foods as tending to poison the blood with gouty ptomaines; should forego emotions of every character; should give up all habits tending to promote the progress of the disease. If he be gouty he should be purged daily until considerably depleted; if syphilitic, the specifics are necessary; if a lead-worker, he is prohibited from exposure, and treated constitutionally; so, also, if suffering of chronic alcoholism, or Bright's disease.

When the heart grows weak, nitroglycerine is specially recommended as having the two-fold effect of restoring its strong beat and relaxing in great measure the vessel's hardened walls; it is administered hypodermically in 1-100 grain doses four, five or six times a day, to meet the exigencies of the case.

To promise a cure for an advanced case is to strain one's conscience.

Physicians are, therefore, urged to adopt measures early for its prevention.

A Case of Congenital Malaria.

Dr. Winslow has reported in the Boston Medical and Surgical Journal the case of a male child, ten weeks old, apparently healthy and weighing seven pounds at birth, that did not flourish on its mother's milk and suffered from colic and vomiting. The child slept little, cried a great deal, was constantly moving, and had cold hands and feet. It had become emaciated, pallid, and weak. Various forms of artificial food had been employed, but without permanent benefit The muscles of the limps and neck were rigid, the head was slightly retracted, and handling induced crying. While under observation the little patient had a severe convulsion, characterized by muscular rigidity, loss of consciousness, clonic spasms, and strabismus, followed by a period of muscular relaxation and stupor. It was now learned that similar attacks had taken place from birth, being always preceded by prolonged crying. The child became so ill that the prognosis was for a time doubtful. The question of malaria was suggested by the family, but, as the temperature had been normal and no periodicity of the symptoms had been observed, the matter was left in abeyance. The mother had had quotidian malaria of a severe type for two weeks preceding the birth of the patient, but treatment had been withheld on account of the existence of pregnancy. The symptoms disappeared at the end of labor. Improvement in the child's condition failing to take place in spite of varied treatment, examination of the blood was made, with the result of disclosing the presence of malarial plasmodia in abundance. The child was given one grain of quinine by enema twice daily, and the convulsions at once ceased, although the muscular rigidity, the sleeplessness, the colic, the constipation, and the restlessness persisted. After a month of such treatment the removal of the child to a non-malarial place was advised. Improvement at once set in, and after a week the quinine was withdrawn and one-fifth minim doses of Fowler's solution were prescribed. The plasmodia disappeared from the blood, the child gained in weight, and in a short time was quite restored to health. The opinion is expressed that the plasmodia were probably conveyed directly by means of the fœtal circulation, although the possibility of infection through the mother's milk is not to be excluded. As the symptoms were the same up to the time that the diagnosis of malaria was made, it seems evident that the disease existed from birth.

Leprosy Curable, and Neither Contagious nor Transmissible to Offsprings.

Dr. Hutchinson (Archives of Surgery) says: I have just seen a gentleman, formerly a colonel of troops serving in India, who sixteen years ago consulted me for leprosy. He was most severely affected, by the mixed form, in part tubercular and in part erythematous only. His eyes had suffered and he was quite blind. He is now, and has been for many years, quite free from all active leprosy manifestations. He is florid, and would be taken for a man in good health, but his hands and feet are still numb and liable to become dusky. He was married at the time that this disease began, and two children were born to him whilst it was at its height. These children are now fine, well-grown girls of sixteen and eighteen respectively. He has lived throughout in cohabitation with his wife, and she retains good health.

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CONSERVATISM IN THE MEDICAL PROFESSION.

Conservatism in this article means that professional reserve, dignity, honor and professional etiquette which should characterize and exist as an essential part of every man.

It is needless to say that this sort of conservatism is in striking and pleasing contrast with the spirit of commercialism and self-seeking which is so rife among the medical profession.

The genial, modest, devoted and consecrated physician is rather in the background and the hustling, bustling,advertising medical disgrace is very much in evidence.

The physician who speaks, if he speaks at all, of his achievements modestly and becomingly, or spends his time earnestly, patiently and persistently in pursuit of the highest professional ideals, is apt to be brushed aside and discarded for the College Professor who has a pull with some hospital or free dispensary, or the advertising quack who is always ready and willing to promise to cure anything and everything as long as the patient's purse remains in a plethoric condition.

The spirit of commercialism is getting such a deep hold upon the body politic that it is little wonder that the staid conservative medical profession has become infected. The keen competition existing in every department of life is now prompting men to do many acts that are not within themselves unlawful, yet in the light of medical ethics are decidedly unprofessional.

Who of the great army of conscientious medical gentlemen has not met the self-seeking,self aggrandizing,egotistical upstart who knows everything when in the consulting room and tells everything that may be detrimental to his professional brother when out of the consulting room? And who seeks, by a shake of the head, a wink of the eye, or shrug of the shoulder to belittle the faithful efforts of his colleague.

The question arises: What is the remedy? What is to be done about it? A few of the proposed remedies for this professional piracy and commercialism are given for what they are worth.

(1) A better understanding of the code of ethics. This knowledge should be taught in the Medical Colleges of ever school. It is not one medical graduate in a thousand who leaves his Alma Mater with a well defined idea of the great central principles of Medical Ethics which includes (*a*) his duty to his patient, (*b*) his duty to his professional brother and (*c*) his duty to himself. We conclude then that one of the many crying needs of medical teaching is better instructions in those all-important elements which place men on a higher professional plane and preserve them from reproach.

(2) The regular profession should hold aloof from these commercial "rooters" and irregulars. They get far too much recognition from the profession.

(3) The laity may be educated by the profession in regard to the higher qualifications necessary for a well rounded physician to possess, as well as the proper conduct of his life in relation to others.

(4) Let the State Boards of Health, which are generally composed of men from all schools, take up this matter of professional piracy and weed out those whose conduct is daily bringing contempt upon a noble profession.

Such an adjustment should be made that professional probity and fraternalism might be encouraged on the one hand, and nihilistic tendencies checked on the other. The time is surely coming when every one who claims to be a regular physician, and who seeks to injure, forestall or eclipse his colleague in any unprofessional way, shall be classed with the "Rooter," the quack, the irregular and the charlatan.

PHYSIOLOGY.

The medical student's sheet anchor and the active practitioner's constant companion. How little this is fully realized by the every-day physician, his school days passed and now the only object in view is theory and practice of medicine.

This is all right for the "book man" who can prescribe only from printed formula that have been tried by his favorite author, and given as the most successful in his experience. What a feeling of disappointment and dissatisfaction after mastering medicine and obtaining the degree of M.D. not to be able to think, act, and theorize his own diagnosis and treatment rather

than to appeal to one who can give us no more than his opinions based on facts, all of which might be our own just as well only we lack the self-confidence in coming to a correct conclusion. One of the principal faults is the lack of physiological facts we fail to obtain, and keep familiar with not only during our student-years, but during the time of actual work as a physician. How important it is to have a clear and intelligent knowledge of the physiological functions, of the different organs of the body to readily recognize a pathological condition and if the abnormal condition is readily determined how important it is in an intelligent treatment to have in mind what should be a normal state of affairs, and what is necessary to establish this condition again.

Take the simplest form of disease affecting the alimentary canal which occurs in the mouth. How important it is we should know the secretions which are formed there, the reaction, cause of secretion and the purposes of the secretions before we attempt to apply any treatment for fear of doing harm to the normal functions.

Then again what opposite results we may get from the administration of hydrochloric acid by giving it at different times in regard to the condition of the stomach, whether empty or full, if we give it after a meal to relieve acidity of the stomach, we increase the difficulty. If given on an empty stomach before meals for acid fermentation of the food, we again ignorantly do our patient an injury. But if the order of giving be changed around we get the good results and relief of the patient, for which we are so earnestly laboring, all of which would be a wandering in the dark, without the light and guide, physiology.

DEPARTMENT OF HEALTH.

Today the great army of earnest thoughtful men and women, upon whom the American people place the responsibilities and burdens of preventing and curing diseases, are without a properly constituted head, and we, naturally, ask can over one hundred thousand unorganized workers, scattered here and there through the villages, towns and cities of our vast territory, accomplish more than a tithe of what they would if they had a vigorous wise head to lead, direct and command.

A score of organized men, well directed will disperse the leaderless thousands yet, the medical profession, the greatest and most learned of all professions is still an unorganized vital aggregation of units. Medical societies accomplish much, but they do not govern, lead, or organize the medical forces. In fact they do not represent 30% of the members of the profession. Being voluntary, non-representative bodies they have but little influence over the great mass of practitioners. As time passes we hope their membership and influence will increase and they may rely on this Journal doing all it can to strengthen them, but their sphere is not to lead, direct and command. We must look elsewhere for a head that will be in reality a head, which will have the active, willing support and obedient loyalty of all honorable and legally qualified practitioners as well as have a terror for every illegal pretender and quack. Such a head must have the endorsement and support of the American people with the means and powers necessary to intelligently and successfully marshall the forces which care for the health and lives of our people. It is an imperative necessity and the absence of it is a disgrace to the civilization of this great nation which boasts of a government of the people by the people and for the people. With the Journal of the A. M. A. we say "Let us have a health department."

WHY IS A PROPHET NOT WITHOUT HONOR SAVE IN HIS OWN COUNTRY?

Why does distance lend enchantment, or in other words, why will a patient willingly pay from four to five times as great a fee to some distant physician as to their own family physician or to some other in their own town?

That the above are facts, no one will deny. From the city specialist to the general practitioner in the country. They have all had the same experience. Patients from neighboring towns will pay a twenty-five dollar fee willingly where they would have begrudged five dollars for the same service from their own physician. The question why, has many answers.

1st. The human race seem to be so constituted, that something new to them, has great attraction. A physician or surgeon, that they have not seen, or have not become intimately acquainted with, but only heard of seems to be a sort of god. You know we are nearly all, (notwithstanding our reluctance in admitting it,) more or less hero or rather, manworshipers. We imagine something almost supernatural about a man with a reputation until upon closer acquaintance we find him to be only a mortal like ourselves. Consequently we feel willing to pay more for his services, expecting to get

better services, and do we get better services? Most always, yes. And why? Now here comes the point I wish to bring out. If a patient comes to us from a distance, we expect to receive a good fee, and feel that we must take great care and make a thorough and correct diagnosis, and use the correct and best treatment, so as to make a reputation for ourselves in this patient's locality. (We already have one in our own.)

We spend one half, one or one hour and one half with the case where we would have used probably, not more than ten or fifteen minutes with one of our old patients, and here is the lesson to be drawn. Spend more time with your own patients, make your diagnosis more thorough, and thus your treatment more effective. When your patient comes to you the second, third, fourth, or even the fifth time, examine carefully each time, especially if they are not doing well. Don't change treatment too often, or too soon, not giving it plenty of time to accomplish what is expected of it and your patients will stay by you, not go to some other physician, either in your town or some neighboring city, and above all, keep up with the times. Keep well posted, so as to be able to give your patients the best of everything, and let me just hint to you, that the best way to do that is to take plenty of good progressive medical journals, and be sure and *read* them, and you will be with honor, even in your own country.

DYSPEPSIA.

Most of the current literature on diseases of the stomach indicates too great a reliance on drugs and too little attention to hygiene.

We are prone to follow the habits of our parents and by doing so we cultivate the same weakness and diseases, but we do not inherit either a weak stomach or dyspepsia. If we always ate the proper amount of the proper food in the proper manner and at the proper times, we would have no stomach troubles. All the common diseases of the stomach are functional and are due to errors of ingestion.

Furthermore experience teaches that these troubles will as a rule disappear without the use of drugs if the errors of ingestion are corrected.

"Errors of Ingestion!" "Errors of Ingestion!" What an ocean of suffering they have caused humanity, yet some of our physicians treat the various disorders of the stomach without any persistent and intelligent efforts to discover these errors and correct them. How absurd to endeavor to cure by administering purgatives with bitters and acids a dyspepsia due to a continuous overeating or to eradicate by bitters and alkalics a fermentative dyspepsia due to bolting an almost exclusively farinaceous diet. It is just as absurd to give soda to relieve the burning acidity which annoys patients who do not drink half as much water as their systems require for digestion, assimilation and elimination. In many cases the assistance of drugs is necessary, but it should be secondary. We cannot intelligently prescribe for any digestive trouble until we have learned its cause. To do this we must be well versed in the physiology of the whole digestive system and have sufficient knowledge of chemistry to interpret the atomical changes which may take place in the disordered alimentary canal and we must ever remember that chronic errors of digestion are due to persistently eating the wrong food or the wrong amount, or else eating at the wrong times or in a wrong manner.

WHAT MUST I EAT?

As we sit in our office day after day prescribing for the different ailments of the human family, how often the question is asked of us, "Doctor what must I eat?" We at once lay down certain articles of diet, (just what we could eat under the same circumstances) and think it strange if our advice does not give satisfaction to the appetite of our patient.

How strange it is that we should measure the needs of others by our own, or by some one we take as a model of authority. Not for a moment would we think of gauging other's wants by our own in any other purpose. We cannot find two persons whose wants are identical, neither do we find two constitutions that are identical in their different functions and requirements. To arrange a systematic form of diet would tax the most active mind when you bring into consideration the different facts to bear upon it.

In one residental block in a city, we find variety of tastes enough to create a demand for all the varieties of the vegetable kingdom. You may say it is habit, that may be true to some extent, but we cannot eat that which we have no desire for. It is the desire resulting from the vital activity of that one particular individual that must be satisfied. The desire for certain articles of food indicates a different method by which that constitution obtains its nourish-

ment from that of a person of different tastes.

The liver, pancreas, gastric glands, salivary glands, &c., each produce a composition peculiar to itself and they all derive the supply from the one common source, the blood. So it is with every person. They have one common object in view, that is to live and grow, and with many means of supply to meet the many different constitutional peculiarities.

It is better to consider the tastes and desires of every individual patient and combine the facts obtained with our knowledge of physiology so we may be better able to give intelligent instructions.

If we give a diet of marbles they are quickly thrown off by the stomach as not the article wanted, while on the other hand allow something to be taken of which there is a desire and how quickly the functions of digestion are brought into activity. Do not insist on your patient taking forms of nourishment which are unbearable to the taste. The call for a supply of nourishment, and especially the quality and kind, is governed by the digestive functions, and if it is not gratified, the food forced upon it is rejected by the stomach almost as quickly as is the diet of marbles.

THE SCIENTIFIC APPLICATION OF DRUGS.

In this day of quacks, patent and proprietary remedies, we are apt, unless we keep our eyes open, to forget the greatest point in our profession, namely—the scientific application of drugs. To understand this important point, a knowledge of the physiological action of drugs is necessary. In order to perfect this science, we cannot urge too much upon the profession the importance of the study of physiology.

When disease invades the human system, and the physician is called in to meet the disease in the battle for life or death, how important it is that he should have the right implements of war to be successful in the conflict. We may look with pride upon the Country Doctor of long years ago, when he rode horse-back, it may be, through sunshine and rain to administer powders and pills to his suffering patients, and learn a few lessons from him. His saddle-pockets were well dosed with Calomel, Quinine, Ipecac, Opium, Bismuth and a few other drugs. With these drugs he was eminently as successful, if not more so, than we are today, with our combination of remedies, and shot-gun prescriptions. In this age of progress, when many true and tried remedies are passing into disuse, to make room for the new, we are apt in our desire to accomplish something great, to close our eyes to some of the simpler things that go to make up the practice of medicine. It is better far, to know thoroughly the physiological action of a few drugs, and hurl them at disease with a belief that they will be effectual, than to have a smattering of the whole of Materia-Medica. In looking out for the little things that figure in the practice of medicine, we would not undervalue the wonderful strides being made along the line of medicine and surgery. Like the Quack, who described the nature of the disease to his patient, we must make an impression. "Madam" said he, "the nerves of your tympanium have fallen on the cerebelium causing a tizarizen, and it is what we call a scrutinary complaint." "Goodness me," she exclaimed, "you're the first doctor that ever told me exactly what was the matter." Let us strive, not to deceive our patient like the Quack, but to stand upon a solid foundation ready to meet our enemy at all times.

VAGINAL DOUCHE.

We wish to condemn the routine use of the vaginal douche before and after parturition. The physican should use an aseptic antiseptic douche if he has good reasons for believing the vagina is infected, but never because he thinks injection is simply possible and above all he should never use a non-antiseptic septic wash as is frequently done when the physician orders a teaspoonful of Carbolic Acid to a pint of water to be given through an unboiled syringe. It requires six drams of Carbolic Acid to a pint of water to make it a fairly active antiseptic wash. In consultation we have seen at least two cases of Sepsis in parturients due to the use of syringes which had been washed in antiseptic solutions, but not boiled. Experience teaches the superiority of Asepsis over Anti-sepsis and the parturient room demands the very best our profession can give. Every physician should insist on really clean clothes for bed and patient. The tick should be covered with an oilcloth over which no old dirty quilt should be allowed. The discharges should be caught in absorbent cotton or goods that have been boiled and ironed while the historic skirt should be relegated to the garret. The patient's body should be rendered practically aseptic by soap and water in the very earliest stage of labor. The vulva and adjacent parts may be washed with some antiseptic as a solution of formic aldehyde. Immediately before

each vaginal examination the physician should render his hand and arm aseptic. If he has not had a suitable opportunity to advise his patient before he is called and if labor is well advanced when he enters the room, he should remember that if the vagina is free from Gonococci he need not fear sepsis unless he introduces it. In the ordinary confinement the use of the douche suggests the physician's belief that his patient has had Gonorrhœa or else that he has introduced some septic material. The first is a low, contemptible estimate of the patient or her husband, while the latter is a serious reflection on his own professional ability.

ALKALINE ANTISEPTICS IN SURGICAL AND GYNECOLOGICAL WORK.

For a long time I had searched for an ideal antiseptic, one that was first of all, an antiseptic, second non-odorous, third non-irritating, fourth not poisonous, but having for some time used Doctor Carl Seilers alkaline nasal antiseptic tablets with such good results in nearly all the nasal discharges, I wondered why they acted so well, and finally after testing discharges with regard to their reaction, came to the conclusion that it was the alkaline with the antiseptic that produced such results. And for the past two years, I have used a solution of tablets of Seilers formula, as a last wash for my hands before an operation, as a wash to cleanse the parts to be operated on, my instruments (previously sterilized) lay in a hot solution of the same, and my douching, during the operation and after, is of the same solution. The result never any acid or irritating discharge, no odor from the discharge and no odor from the solution used. My hands keep smooth and soft, a thing not possible, with large usage of permanganate of potash, oxolic acid and bichlorides. There is absolutely no danger of poisoning from the solution, and last, although not least, it preserves my instruments rather than injuring them. It is easily prepared and readily carried.

It prevents suppuration. I have but little if any, after some operation, that I usually expect profuse discharges from.

Before treating or examining any serious vaginal or cervical or uterine trouble I mop the parts with a pledget of aseptic absorbent batten, wetted in a solution of the same, and on account of the odor, I use Aristol as a local powder dressing instead of iodoform, or other strongly odoriferous powders. Our patients of the present day want, not only good results, but sweet, painless, clean, and pleasant operations and treatment, and the doctor who looks, not only to results, but to details, is the one who succeeds.

USE OF THE FORCEPS.

The tendency among obstetricians is to a yet more frequent use of the forceps. This is not objectionable unless the pendulum swing too far in this direction. The skillful and timely use of this instrument should be encouraged, but its clumsy and inconsiderate employment can not be too strongly condemned. A bungling and brutal operator, heedless of the pain he inflicts, thrusting the rigid steel into the sensitive parturient canal is a sight that always creates contempt and disgust in the minds of all humane people whether physician or others. On the other hand, the sympathetic and dexterous physician, who with instrumental aid quickly relieves the exhausted woman, is an object of veneration, for the time being at least.

The use of forceps being under discussion at the May, '97, meeting of the Indiana State Medical Society, a member stated that he employed it once in ten cases—others quite as often, and these statements met the sanction of the house. This may be accepted as the concensus of professional opinion in this country. What a change of thirty years agone. Then the doctor who dared to deliver every tenth woman with instruments would have been tarred and feathered.

The forceps as a *time* saving instrument should be condemned, but as a *labor* saving device, its use should be encouraged.

THE DOCTOR'S RELATION TO MEDICAL ASSOCIATIONS AND JOURNALS.

It is a matter of congratulation to our profession to-day that the number of physicians and surgeons who annually seek admission to our various medical associations is largely on the increase; and again it is most encouraging to find in the libraries of a large per cent. of our doctors, even in the smaller towns and country districts, the very latest text-books and a number of the best medical journals published. I can well recall when there were many counties in a number of our States where a representative of the State Medical Society could not be found, and well do I remember to have once heard quite a successful practitioner, in his day, objecting to medical associations, for the reason that he did not want to be giving to others the knowledge which he had gained by study and practice; if he was a subscriber to a medical journal I fear he never read

it, since a few years after clinical thermometers came into general use one of his patients, an intelligent gentleman of the legal profession was questioning him regarding normal body temperature, and to the chagrin of the doctor he soon found that his legal brother was better posted on clinical thermometers than was he himself, so in that instance, to his sorrow, "the last straw broke the camel's back," and a good patient was lost to him forever afterwards.

The physician who does not take and read freely the medical periodicals of to-day can not fail to get woefully behind in the race of professional life, he must do it in order to be on even footing with his colleagues in consultation, and, besides, he owes it to his patients that he use diligently every means for the advancement of his attainments in preparing himself to be ready to assist in preserving the health of individuals in communities and to aid nature in dispelling disease. Active work in medical associations, and careful perusal of the better medical journals of to-day will enable the intelligent doctor to accomplish the ends referred to and stay in the front ranks of his chosen profession.

A FEW REMARKS ON THE TREATMENT OF DIABETES.

Our atiention is called every day more and more to the great increase in the number of cases of Diabetis. The learned (?) members of our profession immediately in flict us with long and exceedingly scientific papers and lectures on the subject. All to my mind tending in one direction "namely," *on how little* food it is possibly for a diabetic to live on or more *properly to die quickly on*. The man who would treat one of this class of cases on a "skim milk" diet, (and I am sorry to say our profession still contains some such survivals of the "know nothing" age,) deserves the halter. If there is any disease in our long list, that requires a good careful stimulating and life-giving diet this is the one. The reason most of our men get no results in its treatment lies right here. They forget to tell their patients *what they can eat*. The text books only tell us as a rule what they *cannot* eat. We hear any amount of puffing of certain kinds of "non starchy" flours absolutely free of all starch, &c. As far as I have been able to find out *no such* flour can be found any where. Some of the most vaunted proprietary flours contain as high as 80 to 90% of starch and still we can get "honored" members of the medical profession to endorse them. My advice to you, my brother, is to beware of any highly puffed proprietary article, the puff is paid for in some way or another. Good home made "Wheat flour" bread, well baked, and in bad cases toasted. will in a great majority of your patients fill the bill. One or perhaps two thin slices with each meal, will *not* affect the amount of sugar in the urine to any extent and will besides relieve your patient from being made into a "bran eating animal."

As much *good fresh cream* as your patient's stomach will bear three or four times a day, but no milk. Good juicy sirloin steak cut from healthy fat stock; if necessary, take a few minutes and show the butcher what you want your patient to have. Fresh fish in plenty served with a good nice lettuce salad, the dressing made with oil and vinegar. Good roast poultry or game with fresh celery. No pork and no liver. Light clear soups without any potatoes or other vegetables in it. No pies or cake of any kind. A weak cup of tea or coffee without sugar or milk but with plenty of cream if wanted, once or twice a day. Do not drug your patients with opium or its preparations. They only mask the disease and do untold harm. A good hot whiskey toddy at bedtime will give better, clearer, deeper sleep than any opium drugged dreams.

THE EXAMINER OF LIFE INSURANCE RISKS.

For many years I have been examiner for life insurance companies, and I find much distrust from the medical directors of the companies of the examiners reports, and why this distrust and if it is deserved, what is the remedy, has been the study of many physicians as well as myself. I find most companies pay well for what they expect to receive good and honest service. Some companies such as our fraternal beneficiary societies pay sums so small, that no man of ability is paid for the time, he should honestly devote to the examination, and as a result, they must expect, either the services of incompetent men, or the incompetent services of men who are competent; in fact, when you ask a physician with a good business, a man well educated and competent, to make life assurance examinations, to fill out the applicant's blank and his own, and make a chemical analysis of the urine and if necessary a microscopical examination also, and pay him for all this work one dollar, and then even ask him, or let the organizer, ask him, to do the work for fifty or seventy-five cents, because of his having a number for him to examine at a

time, what kind of examinations can you expect. Certainly they will be hurried, erratic or dishonest ones. But when a company pays five dollars for the examination alone, they expect and certainly should receive, careful, correct, honest and intelligent examinations, but they do not always, and for that reason, even those who do give good service are mistrusted. Now as to the remedy. Only competent and honest men should be accepted by the companies as their examiners and only a limited number in a place, for instance in a town of 3000 there should not be over two examiners. I mean by this, let all the companies appoint the same mán examiner and the other assistant, and let no man examine a risk where he is the regular family physician. Thus doing away with the temptation of misrepresenting the facts on account of fear of losing the practice in the applicant's family. Have the examiner apply to the family physician for any special information needed, and require every physician who wishes to become an examiner for the companies pass a special examination before a board agreed upon by the companies doing business in that place and have a certificate of having passed such examination, requiring said physician to pay enough to cover expenses of examination. My idea would be to have said board meet in each congressional district, when necessary. This would be somewhat expensive but any physician receiving the amount of work, he would receive, on this plan, would only be too glad to go to this expense. I believe this or some similar plan must sooner or later be adopted.

THEORY VERSUS PRACTICE OR THEORY AND PRACTICE.

We too frequently find a class of physicians who essay to decry too much theory in medicine. Their dilations are loud and long on what they are pleased to term the "theorist" in the profession. In speaking of some fellow practitioner, they will say: "Oh! he is a pretty good fellow, but has too much theory."

This class of men are in the habit when speaking of some colleague having an overdose of theory, of trying to leave the impression that they, themselves, are so very *eminently practical*.

Of course, they say theory is all right, but one must not make a hobby of it.

They say that all this talk about microbes, bacteria, infection, sepsis, asepsis and antisepsis is all mere clap-trap. They sneeringly refer to the science of Bacteriology as "Bugology," and thus attempt to wipe it off the map in truly Lilliputian style. They totally ignore such medical innovations as microscopy and histology.

New drugs they look upon with great suspicion or positive distrust, and only drift into their use after they have become old. They are opposed to serum therapy and physiological or cell therapeutics. Like the Irishman they are "forninst the government" on all the most important and progressive issues in medicine. These men are so practical that they seldom, if ever, buy a new book for their library, because, forsooth, it will be sure to have too much theory in it. They prefer the old out of date volumes that meet their ideal of practicability. They have the same objections to the best medical journals, because they are not practical enough. And right here, be it said, this class of men are not all confined to the obscure walks of the profession. A large per cent., however, are found in small towns and country places, who have fallen behind the procession, but occasionally we see them prominent in places for which they have no fitness whatever.

Now and then they send in their retrogressive ideas to some medical journal. Occasionally one such occupies the editorial sanctum, of which there is, at least, one lamentable and conspicuous example in our mind:

And it does sometimes happen that one by reason of his "pull," political or otherwise, gets into a medical college as a Professor, (?) but he is such a missfit that time soon relegates him to a back seat.

An examination of the armamentaria of this class of men is in perfect keeping with their great fear of too much theory. They certainly are consistent in this one particular, that their libraries, office fixtures and mental equipment generally correspond to the unprogressive doctrines which they seek to promulgate. In a word, professional inertia is their preponderating trait, and they would rather be considered in any other light under the sun except what they are pleased to consider ultra conservative.

The truth about theory is, that it is the very essence and foundation of intelligent practice. The great body of the profession recognize that the ability to practice is never up to their theoretical ideals. It is also a matter of general observation that, other things being equal, the more theory a man has, the more intelligent and thorough will be his practice.

A large amount of theory in any medical man indicates painstaking research, and research certainly is one all important element

in a thorough equipment for the rational practice of medicine.

So that in all ways theory and practice should be considered as intimately related and interdependent, and all efforts to belittle the one, or magnify the other, is entirely out of place, and leads to a misunderstanding of the vital necessities of a well ordered medical mind.

Theory always has been, and always will be, ahead of practice. This is as it should be. The activities of men's minds are always ahead of their actual performances. That men are frequently wrong in theory, no one will deny. They are just as often wrong in their practice. Mistakes are not limited to theory. The class of men who are afraid of theory, or pretend to be, are more likely to be wrong than those whose theory has, so to speak, blazed out the way for an intelligent practice.

So that, as a rule, the medical men who possess the largest amount of theory in medicine, are the ones who will be able to meet the greatest number of the emergencies of practice.

Let the progressive physician beware of the ultra practical class and keep out of their rut, for it is a deep one, and once he gets into it, his extrication is exceedingly doubtful.

SUGGESTIONS.

Many physicians have favored the idea of "Suggestions," as applied to the mind of the patient, entering into the rationale of modern therapeutics, and a great many more laugh at or spurn the idea of such vague notions.

Without proper thought and study it is true it seems to savor of mysticism. When we have evidence of an occurrence, before we realize or know such an occurrence took place, we firmly believe it if the source of evidence is reliable. Why not then believe in the power of suggestion as a means in the treatment of many forms of disease. We have plenty of evidence to substantiate this as actually the case, and to prove this assertion we will give a few illustrations which are conclusive and beyond any successful contradiction.

A person is suddenly brought into the presence of a filthy, loathsome sight, which immediately acts as an emetic. Then we take him into the presence of a bloody operation for the first time and in spite of the utmost exertion, nature gives way, he falls unconscious, why? By what influences are these conditions brought about? Is it not by suggestions? We allow our subject to recover sufficiently to enjoy his regular meals again and while he is in the midst of a banquet, suddenly inform him that a near relative has just been subjected to the trying ordeal, he so recently witnessed, and we will be able twenty-four hours afterwards to pump from his stomach food that had been taken at the banquet almost as free from the influence of the digestive ferments as when it was first eaten. If he should chance to inhale some obnoxious odor the chances are, his stomach would be unburdened voluntarily through the medium of smell.

Here we have several conditions brought about, that are not physiological, through the medium of three of the senses, namely, sight, hearing and smell. These will be sufficient to prove the influence of suggestion or impression. If an impression which is real can stop a physiological progress in the stomach why cannot a suggestion if it is made to seem real to the patient do likewise. The question now resolves itself into this problem. If suggestion on the one hand will bring about a pathological condition (which it must be as it is not physiological) is it not reasonable to suppose on the other hand that an abnormal condition may be changed to a normal by impressing the patient with suggestions to that eud.

In my early practice I formed the habit of telling my patients what changes to expect from medicine left, and nine times out of ten, was gratified at getting the result hoped for but which I had ignorantly made my patient believe was an unavoidable consequence. I say ignorantly because I unintentionally *suggested* to them the change wanted, while I only thought of showing them how well I understood my profession. Through experience I still keep up the practice with the hope of it still helping the other methods of treatment to bring about a restoration of the physiological functions of the body as well as the mind.

THE TREATMENT OF BRIGHT'S DISEASE

The treatment of Bright's Disease continues to give the medical profession something to think about, and while it is a fact that progress has undoubtedly been made in the management of this disease, we hear very little of the sort of talk that is heard in summing up medical progress along other lines.

That much more is now being done for this class of unfortunates than was ever done before, no one will deny, yet the disease remains intractable in the great majority of cases. It is to be feared that the medical profession has grown too pessimis-

tic in regard to this disease, and often abandon patients as hopeless too early in the treatment.

It is a matter of considerable chagrin that in a somewhat extended review of the treatment of albuminuric nephritis, we find so little of real merit that is new. However, there is a better understanding among medical men in regard to the use of some of the old and time tried remedies.

A review of the treatment of Bright's Disease will not be out of order, especially if it will conduce, even in a small degree, to a more hopeful and cheerful view of this disease.

The classification, etiology, pathology and symptomatology, does not concern us here, but a summing up of the treatment as regards prophylaxis, hygiene, diet and therapeutics cannot fail to be of practical interest to the vast army of busy practitioners who have not the time or opportunity to consult any considerable part of the literature now extant.

PROPHYLAXIS.

It is a solemn duty of the physician to warn all patients, who are subject to renal congestion, of their danger. They should be taught to avoid all renal poisons, toxic or irritant diuretics. Silk or woollen underwear should be worn, and all extremes or sudden changes of temperature are to be avoided. Digestion and assimilation should be as nearly complete and perfect as possible. Excretion is no less important, especially of the skin and bowels, in order that the kidneys may not be overworked.

HYGIENE.

However, after the disease, in whatever form, has obtained a hold on the patient, then his surroundings must be made as favorable as possible. Clothing should be woolen and worn at all seasons of the year.

Climate should be warm, dry and moderately elevated. All bodily and mental fatigue should be avoided. Frequent bathing is of the utmost importance, but if there is any contra-indication the "Dry Wash," as practiced by Dr. Wetmore, of Illinois, may be substituted. This useful device consists in a thorough rubbing of the skin night and morning with a crash towel. This can be done in such a way that the patient need not be exposed to the danger of chilling. Massage will be useful in select cases. All hygienic measures to promote the activity of the skin should be constantly and persistently in use.

DIET.

The dietary of nephritics is of the utmost importance, and unfortunately there is some disagreement among those high in authority. Some experienced medical men advocate a meat diet, where fish and milk do not agree well, while others equally experienced say that no meat should be given. The probabilities are that both are correct, from the fact that every case is, to a certain extent, a law unto itself. No hard and fast rules will apply. Chiron says: As a general thing, dark meats and meat extracts are to be avoided on account of the toxic properties of the ptomaines which they contain. He thinks white meats may be used where the disease is not active. Eggs are to be used if they agree well or do not increase the per cent. of albumen in the urine. It is thought by some best to give the yelks only as long as the albuminuria continues. Gruels, well toasted bread, and certain kinds of stewed fruits, agree well in some cases. There is great unanimity, however, on one article of food, viz.: milk. There are few stomachs that will not tolerate milk in one or more of the six or seven different forms in which it can be served. A grape diet is said to have a happy effect in some cases.

One thing the physician should keep prominent before his mind in the dietetics of this disease, and that is that all *starchy foods* are, as far as possible, to be eliminated.

THERAPEUTICS.

In severe acute attacks of Parenchymatous Nephritis, accompanied by fever and pain, dry cupping and antipyretics may be used with prompt relief. Diuretics should not be employed in the acute stage. Oliguria is to be met by abundant warm drinks. Suppression calls for hot packs and hypodermic injection of pilocarpin, gr. 1-12–1-8, and whiskey if there be danger of depression. Pilocarpine, however, should not be used in cases of cardiac or respiratory troubles. Drastic purgation of gamboge, senna, compound jallap powder, magnesium sulphate, elaterium, etc., may be used to assist in unloading the system of uræmic toxic products.

In sthenic cases, bloodleting may be resorted to. Chloroform may be used to control the convulsions. Ether should not be used. Bromide of potash and chloral are two efficient servants to prevent the recurrence of the convulsions. They may be used per rectum.

When uræmia becomes chronic, eliminative and tonic measures must be pushed. Iron and manganese are the most important if well borne.

Dropsy, when it becomes general, must be energetically treated, especially if it

shows a tendency to increase. One of the efficient remedies is apocynum cannabinum, of which Dr. N. M. Baskett, of Missouri, says in part: My experience with the drug has convinced me that its merits have not been exaggerated, and that it may frequently be used in watery effusions, either alone, or in connection with strophanthus or digitalis.

Saline diuretics, such as acetate of sodium, acetate, citrate or bitartrate of potassium may be used to increase the urinary flow in in chronic parenchymatous nephritis, but should not be persisted in if they fail to do the work intended for them.

High arterial tension in interstitial forms, can be managed by nitroglycerine for varying lengths of time, and we will often be surprised at the quantity that can be borne with seemingly good effect. The 1-100 grain tablets are the best and most reliable form of the drug to use. To relieve the nervous symptoms the 1-12 grain pills of chloride of gold and sodium can be used alone or in connection with hypnotics and nerve sedatives. In interstitial forms the compensating power of the heart should be kept up by strychnia, strophanthus and digitalis.

Digitalis may be used in the form of a poultice, where it is not well borne by the stomach.

Diuretin has been used successfully in the failing urinary excretion, and carbonate of lithia is said to be of service in the vesical irritation of these troubles.

Protonuclein is one of the latest remedies that is claiming professional favor. It is claimed for it that it inhibits interstitial degeneration, and some very flattering reports of its value have been made.

A NEW JOURNAL.

The Georgia Journal of Medicine and Surgery, edited by Drs. Graham, Dudley and Fitch, is now before us. It is a neatly printed, double column, well covered journal. We congratulate the Editors upon its general first-class appearance. The reading matter is of a very high order and well selected. We wish these gentlemen every success in their new departure.

Dr. E. D. Capps, editor of the Southwestern Medical and Surgical Reporter, is in New York City studying the Eye, Ear, Nose and Throat. After some months in special preparation he will return to Ft. Worth and confine his practice to the diseases of the above organs.

BOOK REVIEWS.

International Clinics, A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynecology, Obstetrics, Ophthalmology, Laryngology, and Specially Prepared Articles on Treatment by Professors and Lecturers in the Leading Medical Colleges of the United States, Germany, Austria, France, Great Britian and Canada. Edited by Judson Daland, M. D., Philadelphia; J. Mitchell Bruce, M. D., F. R. C. P. P., London: David W. Finlay, M. D., F. R. C. P., Aberdeen. Vol. II. Seventh Series. 1897. J. B. Lippincott Company. 1896.

The International Clinics are too well known by its many readers to require lengthy and exhaustive reviews for their purchase. There are no class of works with a more extensive circulation, and none more generally appreciated. The appearance and general make up has of late years been greatly improved. This is particularly true of the illustrations. As heretofore they contain contributors chosen from the very best known clinicians. The writers are recognized by the profession everywhere as progressive, yet conservative physicians, with large experience with the diseases of which they write. There has been a very great improvement lately in the great emphasis that has been placed on the commoner diseases, and especially to the treatment of these diseases in articles especially prepared for practitioners. All the articles in these clinics are of the highest order and will always be so regarded in medical literature.

The Medical And Surgical Use of Electricity. By A. D. Rockwell, A. M., M. D. New Edition. New York: William Wood and Co.

This work is practically the ninth edition of Beard and Rockwell's "Treatise on the Medical and Surgical Uses of Electricity." This edition, as well as many of the preceding, has been issued under the present writer alone. The book has been thoroughly revised and mostly rewritten, thus presenting a book fully up to the times.

Electricity in its relation to medicine, as well as to commerce, having in recent years been wonderfully progressive, the present issue bears little resemblance to the earlier editions. This work is divided into the five following sections: Electro-Physics; Electro-Physiology; Electro-Therapeutics, and Electro-Surgery.

Under the first section is considered the fundamental principles of Electricity, Magnetism, Polarity of Magnets, Magnetic In-

duction, Frictional, or Static Electricity, Galvanic Electricity, Electrolysis, Ohm's Law and its practical application to Electro-Therapeutics.

Under the second section we have explained the relation of Electro-Physiology to Electro-Therapeutics.

The third section gives us a history of Electro-Therapeutics.

The last chapter is that of Electro-Surgery, which is very interesting and instructive.

Among the new chapters is one devoted to the Rontgen, or X rays, while the interesting subject of Static Electricity has been entirely rewritten and greatly enlarged The work is illustrated when necessary. This is one of the most thorough and comprehensive treatises on the subject that has ever been published. The mechanical execution of the work is superb.

TRANSACTIONS of the Associationsof American Physicians. Twelfth Session. Held at Washington. D. C., March 4, 5, 6, 1897. Vol. XII. Philadelphia.

These transactions constitute a large volume of over five hundred pages, splendidly printed, neatly bound and gotten out in first class style in every way. They contain a great many papers upon a variety of subjects. The papers are carefully and thoughtfully prepared, showing much study and research. The most useful ideas and the best thought are often found in transactions. Many beautiful illustrations are found in these transactions.

TRANSACTIONS of the Medical Society of the State of New York for the year 1897.

These transactions are always of a very high order. They contain the minutes in full for the year 1897. They form a volume of nearly 600 pages, neatly executed, making a very handsome and much desired reference book. They contain many very valuable and able papers, together with numerous and interesting reports. The illustrations are excellent.

LITERARY NOTES.

LIPPINCOTT'S MAGAZINE FOR SEPTEMBER, 1897.—The complete novel in the September issue of Lippincott's is "Weeping Ferry," by Margarett L. Woods. It is a sincere, simple, and effective tale of English country life, recording the honorable but passing love of a squire's son for an ex-servant's daughter, and the sad result thereof. Mrs. Wood (who is better known at home than in America) weilds a firm, graceful, and entirely competent pen; every line of her work is true to nature.

"A Fiddle in the Desert," by Charles M. Skinner, deals with an episode of travel in the wild West. H. H. Bennett stations a sentry "At Bridge Twenty-Two," to guard it from being blown up by strikers, and finds occasion there anent for some fine descriptive writing. "Emmy's Going Home," as narrated by Frank Crane, is effected by maternal affection and the unpretentious philanthropy of a millionaire.

"The Trend of Horticulture," by George Ethelbert Walsh, furnishes some highly interesting information as to what has been done, and what is yet to be done, in the way of improving fruits and flowers. By and by we shall have thornless roses and raspberries, and seedless grapes and apples.

William Trowbridge Larned descants at some length upon the "Rocky Mountain Prophets," *i.e.*, the Mormons. "The Chicago Drainage Channel" is described by John L. Wright. Theodore Stanton, who has made special advance studies of the Paris Exposition of 1900, sets forth the part to be taken in it by various nations in Europe.

Some of the peculiar economics of "European Housekeeping," as they appear to an American, are amusingly depicted by Frances Courtenay Baylor. Arthur Howard Noll writes on "Musical Mexico," and Erin Graham on "Books that Girls have Loved."

The only poem of the number is by Mary McNeil Scott.

To present the best thought in the whole range of living literature is the mission of THE LIVING AGE—and how well it has fulfilled this mission for over half a century its record fully testifies. Edited with a sound judgment and a keen literary instinct, it seldom fails to gather within its pages the most valuable expression and record of the world's progress and growth along every avenue of thought and activity, and continually grows in value with the ever steadily increasing stream of periodical literature.

The titles of a few of the papers contained in its latest issues illustrate the freshness, catholicity, spirit and value of this publication: "England and the European Concert," by James W. Gambier, R. N.; "Woman's Place in the World of Letters," by Alice Stopford Green; "The King of Siam," by B. A. Smith; "Newman and Renan," by Wm. Barry, D. D.; "The Dead-Lock in Austria-Hungary," by

Austriacus; "Paris in June, 1871," by A. J. Butler; "Royalties," by F. Max Muller; "The Growth of Caste in the U. S.," by Joseph Edgar Chamberlin; "Recent Science," by Prince P. Kropotkin; "Pascal," by Leslie Stephen; "The Sphinx of Modern London," by F. W. Newland; "The Lesser Elizabethan Lyrists," by Stephen Gwynn; "The Sayings of Jesus"; "Jean Ingelow"; "Mrs. Oliphant"; "A Great Country's Little Wars," with choice selections of fiction and poetry, including Kipling's magnificent "Recessional."

Published weekly, at $6.00 a year, by The Living Age Co., Boston.

An Unusual Case of Hemiplegia.

Dr. W. G. Spiller, in the Journal of Nervous and Mental Diseases, reports an unusual case of a Dane who, at the age of thirty-three, was a chief proof-reader on a daily paper and spoke fluently seven languages. While bathing in the ocean at Atlantic City, in 1891, he noticed two men beyond their depth in danger of drowning. He went to their rescue, supporting one with his left arm while another clung about his neck. He was in this position twenty minutes before the life boat came, and the two men were brought ashore. The patient himself was seized by the undertow and, much exhausted, finally reached land. The same afternoon he took a train for Philadelphia, wrote a letter, and worked all night reading proof. He went home at six A. M., undressed, but before getting into bed lost consciousness and fell to the floor, remaining, probably, a few minutes, as he states that he noticed by the clock that only five minutes had passed. He was unable to rise, though he could raise both arms and move his head from side to side. Power became gradually less in the upper limbs under his observation, and was finally lost. He made some exclamation after he was unable to move any of his limbs, relapsed into unconsciousness for two or three hours, was completely aphonic, though he understood conversation heard at his door, and for the next two days was more or les unconscious. He then found he could use his left limbs, but could not move his right arm or leg or fingers of the right hand. Right hemianesthesia of the body of a considerable degree, and sharply limited by the median line, was observed. After he had awakened from unconsciousness, and on the fourth day of his attack, he replied in Danish to questions in English. After three months he was able to speak some English, and three years later, during a visit o Sweden, he regained the power of speaking the language of that country within a day and a-half. The patient now presents the appearance of a vigorous, intelligent man. He makes no use of his right arm. He has no power of extention, abduction, or adduction in the fingers of the right hand, and only slight power of flexion. On raising the right arm, which he can only do to a very limited degree, a violent intention tremor is developed in the arm, forearm, and hand. Forcible extension of the hand at the wrist also causes this tremor, but an attempt to passively flex the forearm on the arm tends to partially check it. The tremor at the wrist partakes at times of the movements of flexion and extension; at other times it is more rotatory in character. There is no tremor when the limb is at rest. The patient has had this tremor in the arm for two or three years; he had a similar tremor in the right leg (though this was observed also during rest) which developed soon after the paralysis and ceased gradually three years ago, though it returns even now when he is excited. This involuntary movement has not been observed in any other part of the body. Sensation for heat, cold, pain, and touch is now about the same on the two sides of the body. In walking he swings the right leg. There is no muscular atrophy in any part of his body. The knee-jerk and muscle-jerk in the right lower limb are exaggerated, and ankle clonus is present on the right side only. The reflexes at the wrist, olecranon, and biceps tendon are exaggerated on the right side. The reflexes on the left side of the body are about normal. The chin-jerk is prompt. There are no hysteogenic zones. The nasolabial fold on the right side is a little less prominent than on the left. The tongue is protruded in the median line. There is no limitation of the fields of vision, as tested with the fingers. Taste, smell, and hearing are normal. There is no history of venereal disease to be obtained, though his wife has had two or three miscarriages. The patient has three living and healthy children.

Serum Diagnosis.

The committee appointed by the chairman of the Section in the Practice of Medicine of the American Medical Association make the following report on serum diagnosis:

1. In selecting the material used in making the test the choice between: *a*, serum, *b*, dried blood, *c*, fluid blood, and *d*, blister fluid, will depend largely upon whether the object is scientific research, clinical diagnosis in hospital or private practice, or

public laboratory diagnosis where the samples have to be sent some distance.

2. In spite of considerable variation in technique, there has been a remarkable uniformity in the results obtained by those taking part in the discussion, and their average of about ninety-five per cent. of successes agrees with the general average of the cases, nearly four thousand, thus far recorded in medical literature.

3. Each of several methods of technique advocated may thus give good results in the hands of those thoroughly familiar with the details found necessary in each case and the sources of error to be avoided, success depending rather on being perfectly familiar with one method than on the particular one selected.

4. For routine diagnostic work even the very simplest methods may give good practical results, but for recording scientific observations those methods which are accurately quantitative should be selected. This is especially necessary in reporting exceptional cases at variance with the general results recorded or where the observations are made the basis of generalizations.

5. A complete reaction should comprise both characteristic clumping and total arrest of motion occurring within a definite time limit. For practical diagnostic work a dilution of one in ten, with a fifteen-minute time limit, is convenient. In any doubtful case the dilution should be carried as far as one in fifty, or perhaps one in sixty, and a reaction not obtainable at that point should not be regarded as perfectly conclusive. For these higher dilutions the time limit should be extended to two hours.

6. Intensity of reaction in a given serum should be estimated by determining the degree to which it may be diluted without losing its power of giving a decided reaction, both as to agglutination and loss of motion.

7. The intensity of reaction shown by the same serum is influenced by the age, condition, and virulence of the test culture and by the composition and reaction of the culture medium. For purposes of comparison the sensitiveness of the test culture should be taken into consideration.

8. The evidence so far recorded establishes that the reaction may be delayed or occasionally may not be obtained in cases of genuine typhoid infection; and also that it may be exceptionally present in non-typhoid cases, though not in an intense degree.

9. In investigating exceptional and contradictory results the following circumstances have to be considered: *a*. The uncertainty of clinical diagnosis. *b*. The absence of bacteriological or other confirmatory methods of diagnosis during life, giving decisive negative results. *c*. The possibility of overlooking typhoid infection even post mortem, in the absence of characteristic intestinal lesions where a very thorough bacteriological examination has not been carried out.

10. The modifying influences mentioned above suffice to explain the divergencies existing in the reports of different observers. Without being absolutely infallible the typhoid reaction appears to afford as accurate diagnostic results as can be obtained by any of the bacteriological methods at our disposal for the diagnosis of other diseases. It must certainly be regarded as the most constant and reliable sign of typhoid fever, if not an absolute test.

Syphilis Without a Chancre.—Infection from a Wart.

Hutchinson (Archives of Surgery) says: The matron of a maternity home was brought to me on account of an eruption which had been, after much delay, diagnosed as syphilitic. It was characterestic and abundant, and had been attended by some fever and slight sore throat. It had been present more than a month. I felt no hesitation in confirming the diagnosis, and it was subsequently corroborated by the prompt disappearance of all symptoms under mercurial treatment.

The problem in this case was as to how the disease had been contracted. Although the patient's avocation exposed her fingers to some risk, she denied having had any sore on them. She submitted willingly to an examination of the genitals, and I found the hymen perfect, and no trace of sore in the vulva. On looking at her hands I observed a depressed scar on one finger near the side of the nail. This, she said, was the remains of a wart which she had repeatedly cut and which had at one time been painful. The period at which it was somewhat sore fitted exactly with the supposition that it had supplied the place of entrance for the virus. It had never, however, been very painful, and she had never thought of it as a serious matter. Nor had it ever caused, so far as she knew, any enlargement of the glands in the armpit. It had healed without treatment.

I saw this patient a second time, four months after her first visit, when the above statements were confirmed. She had continued mercury, and was quite free from symptoms. I do not think that there can be any reasonable doubt that the wart which

had been recently pared was the site of infection. It had never, however, assumed any of the conditions which usually denote a chancre.

Effects of Caustics on the Uterus.

Hofmeyer in the Edinburgh Medical Journal reports a case where a 50 per cent. solution of chloride of zinc was injected into the uterus. The nozzel of the syringe was very fine, almost as thin as that of a morphine injector, and the os had not been dilated before treatment. The patient walked home, but died with symptoms of acute peritonitis within 12 hours. The body was disinterred for a judicial necropsy 20 days later. There was no doubt strong evidence of peritonitis; the serous investment of the uterus and its serous folds were inflamed. On the other hand, though the endometrium was represented by an eschar, there was no such appearance in either Fallopian tube. Hence the inflammatory process had extended through the uterine wall, whilst none of the fluid caustic had passed along the tubes. Hofmeyer condemns the chloride solution; he even thinks that it acts as a poison. He refers to Duhrssen, who advises its application by means of a Playfair's probe; but Hofmeyer finds that most of the caustic on that instrument is lost on the cervical mucosa; for that reason the advocates of chloride erroneously believe that it can be freely applied to the endometrium with impunity. A needle-like nozzle should not be recommended for intrauterine injections, as it encourages the evil practice of injecting without preliminary dilatation of the cervix. Much can be injected through a fine nozzle, but that much cannot always escape freely through the os, and the os internum may contract behind it. By dilating the cervix, using a syring with a fair-sized nozzle, making sure that the fluid can escape from the cervix and keeping the patient in bed, strong caustics may be used with advantage. Brose thinks that even with these precautions intrauterine injections of any fluid may set up perimetritis. Schroeder recorded that complication when only solutions of tincture of iodine had been employed. He advises that a Playfair's probe be used for the application of the chloride solution, which in particular should never be injected. In leucorrhea, and even gonorrhea, the cervix should be treated first. Duhrssen, on the other hand, is in favor of the injection of strong caustics, but he insists on washing out the uterus with water both before and after the injection of the caustic. He packs the uterus with iodoform gauze on the day before cauterization, so that the cervix is dilated, and in consequence the action of the caustic will be less painful. Sanger condemns both the 50 per cent. solution of chloride of zinc as injection and Dumontpallier's treatment with crayons of that salt. The chloride is an excellent therapeutic agent, but should be used like nitrate of silver and applied by aid of an ordinary caustic holder. Strong solutions of other salts should be applied in the same way, but never injected. Labusquiere notes that Worth and others have recently shown that destruction of the endometrium may not necessarily cure even pure endometritis. In a case where after the use of Dumontpallier's crayons the uterus was removed, it was found that in place of the echar was a perfectly reproduced endometrium. Unfortunately its pathological changes were reproduced as well. Hence much remains to be learned about the national treatment of endometritis.

Hemophilia.

Dr. R. Harvey Reed, in a recent article upon this disease, says that there are two forms of the disorder which will interest the practitioner more than any others.

The first is the ordinary form, which is seen every day; and the second is the rare case which is seldom seen. He points out that blondes are more subject to hemophilia than brunettes, and that males are more subject than females in the proportion of at least 11 to 1.

DIAGNOSIS.

There is little trouble in making a diagnosis, as the disease is usually manifested by hæmorrhages from the mucous membranes which are frequently quite uncontrollable. These are often the result of no apparent cause or provocation, though they follow scratches and teeth extraction, which are ordinarily trivial in character, but in hemophilia may be followed by fatal hemorrhage.

PATHOLOGY.

This is still an unsettled question, and the real nature of the disease is undetermined. As Osler puts it, "we do not know whether it depends upon a peculiar frailty of the blood vessels or some peculiarity in the constitution of the blood which prevents the formation of the normal thrombus in the wound."

With respect to the prognosis, age does not appear to have any influence over the disease, although the figures of Grandidier show that of 152 boys, 81 died before the seventh year. In fact clinical experience shows that a large majority of these cases

die young, and that the prognosis is very much graver in the early years of life, though the author does not say. Death seldom takes place, however, during the first attack of bleeding. In women the prognosis is more favorable than in men, since neither the menstrual period nor parturition, contrary to what is generally thought, increases the danger from the disease.

TREATMENT.

The therapy of hemophilia is both prophylactic and active. All injuries should be avoided as far as possible, while marriage with a "bleeder" should be strenuously shunned.

Active treatment should be general and local, by hemostatic and substances favoring the coagulation of the blood vessels. Tonics and such substances as build up the blood should be administered. The author reports the details of two cases, one of which recovered and the other died. In the treatment of these cases he employed those measures indicated above.

Ocular Complications of Typhoid Fever.

Bael in the North American Practitioner enumerates the lesions in the order of frequency:

1. Conjunctivitis. This is of the catarrhal type, with little or no secretion. It is very common.

2. Phlyctenular conjunctivitis and keratitis. Not an uncommon accompaniment or sequel of typhoid.

3. Loss of accommodation and dilatation of the pupil. Due to the general asthenic condition of the patient.

4. Retinal hæmorrhages. The ordinary forms are of the punctate, linear, or flame-shaped variety and occur usually during the third week. They do not form the subject of complaint, unless they occur at the macula, where they interfere markedly with vision. Bull assumes the retinal hæmorrhages to be due to "diapedesis," resulting from a relaxation of the walls of the blood-vessels, through which the blood-corpuscles escape.

5. Paralysis of external muscles. The muscle-palsies appear during convalescence and even long after. These are due, according to some authorities, to a chronic nephritis. Others regard these as due directly to a neuritis, caused by the typhoid poison.

6. Neuroretinitis or retrobulbar neuritis. A rare complication, and supposed to be a more or less circumscribed meningitis at the base of the brain. This may subside, leaving a moderate impairment of vision, but is more apt to leave an atrophy of the optic nerve.

7. Inflammation of the uveal tract. Iritis, cyclitis, and choroiditis, both serious and plastic (never purulent), are occasionally met with during the height of the disease. Cataract may develop.

The Treatment of Diabetes.

As a result of careful personal observation of a typical case of diabetes, as well as from the quoted experience of others, Monson ("Journal of the American Medical Association") has undertaken to show that a diabetic should be placed under no different conditions of diet than are granted the healthy individual, and that a rigid exclusion of carbohydrates from the diet is productive of abnormal metabolic changes, which result not only in progressive emaciation and weakness, but also in the production of various toxic bodies, to which the severe cerebral symptoms of this disease are to be attributed. From this study the conclusion is reached that sugar is always present in the blood, and that the absence of carbohydrates from the diet does not cause a disappearrance of the blood sugar. Hence sugar must have some other source than the carbohydrates ingested. This other source of sugar is the ingested and systemic albumen, through a process of decomposition. An increased albumen decomposition, due to the rigid enforcement of a purely nitrogenous diet, means an increased metabolism and consequent loss of body weight. Hence the cutting off of carbohydrates from the diet directly produces an increased metabolism. *Vice versa*, the administration of carbohydrates retards metabolism. The diabetic has an especial predisposition towards metabolism. The diabetic has by no means lost the power of burning sugar; therefore, sugar must, even more than in health, be allowed in order to prevent loss of weight and muscular weakness, which may eventuate in one of the natural endings of diabetes, death by asthenia. The abnormal albumen metabolism, which is especially produced by a rigid proteid diet, results in the production of toxic bodies, for the action of which the depressed nervous condition of the diabetic is especially favourable. The production of toxic bodies is prevented or retarded by the administration of carbohydrates. Hence, carbohydrates should be administered to the diabetic to prevent the formation of certain toxic bodies and the severe and often fatal nervous and cerebral symptoms which they induce.

Mississippi Valley Medical Association.

Arrangements are now about complete for the meeting of the Association at Louisville on October 5-6-7-8, 1897. The different passenger associations have granted a round-trip rate of one and one-third fare on the certificate plan. The sessions will be held at the Liederkranz Hall, and the headquarters will be at the Louisville Hotel. The following are among those whose papers have been accepted:

J. B. Murphy, Chicago: "Address on Surgery."

J. V. Shoemaker, Philadelphia: "Address on Medicine."

I. A. Abt, Chicago: "The Nature of Croup following Measles."

J. C. Ayers, Cincinnati: "Further Observations in the Use of Hydrogen Dioxide in the Treatment of Blepharitis Marginalis."

W. F. Barclay, Pittsburgh: "Milk; Its Production and Uses."

J. F. Barnhill, Indianapolis: "Regarding Hypertrophied Faucial Tonsils."

J. M. Batten, Pittsburgh; "Report of Five Cases of Heart Disease."

J. K. Bauduy, St. Louis: "Some New Thoughts in the Treatment of Locomotor Ataxia."

A. C. Bernays, St. Louss: Paper.

A. F. Bock, St. Louis: "The Surgical Treatment of Basedow's Disease."

John Young Brown, St. Louis: "Some Remarks on Appendicitis."

Sanger Brown, Chicago: "Some Anomalous Conditions of the Spinal Cord, with Report of Cases."

Eug. G. Carpenter, Cleveland: "Posterior Radicular Neuritis."

W. Cheatham, Louisville: "Of what Assistance has the Serum Treatment of Diphtheria been to the General Practitioner."

Archibald Church, Chicago: "The Differential Diagnosis and Treatment of Cerebral Hemorrhage and Cerebral Softening."

J. W. Cokenower, Des Moines, Ia.: "Neurotic Deformities in Children."

A. H. Cordier, Kansas City: "Ectopic Pregnancy, Clinical and Pathologic Phases."

J. Homer Coulter, Chicago: Paper.

Ephraim Cutter, New York: "Beef—A War Paper."

Richard Deway, Wauwatosa, Wis.: "Some Cases of Insanity in Adolescence."

Arch Dixon, Henderson, Ky.: "To Drain or not to Drain."

Kennon Dunham, Cincinnati: "The Hypodermic Syringe and Its Use in Malaria."

C. Travis Drennan, Hot Springs, Ark.: "Report of a Case of Anesthesia Produced by Mercury, with Remarks."

Sherwood Dunn, Los Angeles: "Mothers and Daughters."

J. Rilus Eastman, Indianapolis: "Diagnosis by Inspection in the Urinary Tract."

A. R. Edwards, Chicago: "The Diagnosis of Abscess of the Liver based upon a Study of Twenty-five Cases."

Jos Eichberg, Cincinnati: "Typhoid Fever Treated Without Cold Baths."

C. Fisch, St. Louis: "The Antitoxic and Bactericidal Properties of the Serum of Horses treated with Koch's New Tuberculin, (T. R.)."

F. R. Fry, St. Louis: "Pressure Symptoms After Head Injuries."

A. H. Goelet, New York: "The Surgical Treatment of Fibroid Tumors of the Uterus."

Spencer Graves, St. Louis: "Appendicitis."

H. Hatch, Quincy, Ill.: "Severe Injuries from Electricity, and What Best to Do."

A. G. Hobbs, "Mouth-Breathing in Children."

Discussion opened by Dr. H. W. Loeb.

B. W. Holliday, Cleveland: "The Civic Aspect and Therapy of Some of the Common Neuroses."

A. F. House, Cleveland: "Symptoms and Surgical Treatment of Perforated Intestinal Ulcers."

W. H. Humiston, Cleveland: "Cocaine Anesthesia in Perineorrhapy."

C. C. Jacobs, Frostburg, Md.: "The Treatment of Obstructive Lesions of the Urinary Tract, Anterior to the Bladder, with Especial Reference to the Enlargement of the Prostate Gland."

A. C. Klebs, Chicago: Paper.

E. L. Larkins, Terre Haute, Ind.: "Appendicitis."

F. F. Lawrence, Columbus, O.: "Hysterectomy."

Elmer Lee, New York: "The Elimination of Empiricism in the Treatment of Pneumonia."

I. N. Love, St. Louis: "The Relations of the Secular Press to Medicine and the Public."

C. F. McGahan, Aiken, S. C.: "The Treatment of Pulmonary Phthisis."

A. H. Meisenbach, St. Louis: "A Plea for Early Operation in Cholelithiasis."

L. Harrison Lettler, Chicago: "Neuroses of Gout."

Robt. T. Morris, New York: Paper.

Harold N. Moyer, Chicago: Paper.

A. M. Owen, Evansville, Ind.: "Cathartics and Constipation."

A. J. Ochsner, Chicago: "Treatment of Hernia in Old Men."

Curran Pope, Louisville, Ky.: "Sanitoriums a Necessary Factor in the Treatment of Chronic Diseases."

Joseph Price, Philadelphia: Paper.

J. Punton, Kansas City: "The Growing Needs of Medical Political Organization."

D. C. Ramsey, Mt. Vernon, Ind.: "Municipal Sanitation of Tuberculosis."

A. Ravogli, Cincinnati: "Tuberculin in Dermatology."

B. Merrill Rickets, Cincinnati: "Abdominal Incision for Ascites."

Byron Robinson, Chicago: "The Classification of Peritonitis."

Enno Sander, St. Louis: "The Carlsbad Springs of the United States of North America."

E. W. Saunders, St. Louis: "Therapeutic Properties of Infant Foods."

E. J. Senn, Chicago: "The Treatment of Suppurating Fistulous Tracts."

E. B. Smith, Detroit: "Experimental Surgery."

J. O. Stillson, Indianapolis; "Retro-bulbar Optic Neuritis."

L. Strauss, St. Louis: "Primary Tuberculosis of the Rectum with Report of Cases."

J. A. Stucky, Lexington, Ky.: "Intratympanic Surgery in Chronic Suppuration."

J. B. Taulbee, Mt. Sterling, Ky.: "The Treatment of Wounds by the Open Method."

H. M. Thomas, Chicago: "Experimental Work on the Penetrability of Vaporized Medicaments in the Air Passages,"

K. K, Wheelock, Fort Wayne, Ind.: "Plastic Operation for Reforming Interpalpebral Space."

Alex. C. Wiener, Chicago: "Congenital Dislocation of the Hip."

Frank Woodbury, Philadelphia: Paper.

Titles of Papers should be sent to Dr. Thomas Hunt Stucky, President, Louisville, or to Dr. H. W. Loeb, Secretary, St. Louis

The Pancreas and other So-called Sweet-Breads.

Dr. Parry, in the "British Medical Journal," hints at a possible danger to health in the use of thyroid and thymus glands, that may be sold by butchers under the name of sweetbreads. He has made some investigation of the subject and finds that there is a confusion of terms, intentional or otherwise, in the minds of the sellers of meat. He says: In talking to a butcher I was surprised to hear him say that there were three sweetbreads in an animal. I asked him where they were situated and he told me, at the root of the neck, in the cavity of the chest, and in the belly of the animal. I questioned him more closely and discovered that his three sweetbreads corresponded respectively to 1, the thyroid gland; 2, the thymus gland; and 3, the pancreas. To make quite sure that no mistake had been made I watched him, a day or two after, kill aad cut up a bullock. The thyroid gland in this animal is situated low down at the root of the neck over the traches. The thymus (which he told me was bigger in the calf than in the bullock) is placed in a somewhat similar position to where it is in man; while the pancreas (the most important organ) he regarded as the least significant, and told me it was "given in with the liver." He told me, moreover, that if he were asked for calf's sweetbread he would always give (what we call) the thyroid and thymus glands. I have been informed that all butchers do the same thing, though I cannot vouch for the accuracy of this statement. At any rate, it seems to me to be right for every physician to be on his guard when ordering "sweetbreads" for his patients that the pancreas be provided, and not these other glands. An undercooked calf's thyroid gland being repeatedly given in the place of a real "sweetbread" might, as we know, produce untold mischief in a patient, as well as perplex the mind of the prescribing practitioner in a peculiar and undeserved manner.

The Importance of Scientifically Accurate Temperature Records in the Puerperium.

Sarweg (International Medical Magazine) calls attetion to the injustice of a comparison of the percentages of pathological to normal puerperia as reported from the various lying-in hospitals, based upon the temperatures, unless there is a uniformity in the method and time of taking temperatures. If, as is now pretty generally accepted, 38 deg.–38.2 deg. C. (100.4 deg.–100.7 deg, F.) is to be regarded as the dividing line between a normal and an abnormal puerperium, every effort should be made to get as accurate a record of temperature as possible. Temperatures taken in the axilla are too liable to error to be taken as a basis for scientific classification; he therefore advocates the rectum as being most accurate. He has never seen any bad effects to counteract the advantages during the past twelve years, in which all temperatures have been taken in the rectum in wards of the University Frauenklinic in

Tubingen. Uniform rules should be adopted in the various hospitals to obtain accurate statistics in regard to the conditions of a hygienic puerperium. 1. All temperatures should be taken daily, during the first week of the puerperium, between 6 and 7 A.M., and 4.30 and 5.30 P.M., and must be carefully recorded. 2. Temperatures should be taken preferably in the rectum, with every precaution against error. 3. 38.5 deg. C. (101.3 deg. F.) in the rectum should be accepted as the dividing line between the normal and the abnormal. 4. Elevations of the temperature are to be classified according as they: (*a*) have no apparent cause, with absolutely normal involution of the genital organs, (*b*) have demonstrable causes in a local or general infectious process, or (*c*) have causes of a purely accidental nature without connection with puerperal processes in the genitalia. 5. Accurate data of the whold course of the febrile disturbances in the individual cases are required. 6. The mortality must also be reported in connection with the statistics of abnormalities, with, when possible, the causes of death as determined by autopsies.

Infectious Vulvo-Vaginitis.

Dr. Herman B. Sheffield has had an opportunity of studying an outbreak of infectious vulvo-vaginitis in children, and has published the results of his observations. (The Hospital, July 24, 1897). The cause of the epidemic was not definitely ascertained, but the writer is inclined to trace it to the common use of a large bathtub by the girls, one of whom had probably been admitted with the disease, Sixty-five cases in all were observed, the ages of the patients ranging from four to fourteen years. The vaginal secretion was in every case carefully and repeatedly examined, and found to contain pus cells penetrated and surrounded by diplococci, and large and small epithelial cells covered with diplococci. These diplococci were identical with the gonococci of gonorrhœa, and therefore the nature of the disease is evident. Only thirteen of the cases presented severe symptoms, such as scalding urine, hyperæthesia of the vaginal mucous membrane, and more or less bleeding on manipulation. The remaining fifty-two cases experienced hardly any discomfort. In none of the cases, save the complicated ones, was there a rise of temperature. Purulent ophthalmia was the most common complication, four cases in all, and peritonitis comes next in order of frequency. The prognosis is good, in the absence of complications, but the course of the disease is often prolonged, from four weeks to four months, owing partly, the writer thinks, to the hymen interfering with thorough vaginal irrigation. As regards treatment, isolation is essential for the protection of other children. Great care must be taken to prevent the occurrence of purulent ophthalmia, and this is secured by keeping the child's hands from touching the affected parts, and by bandaging the eyes at night so as to keep out any of the pus particles in the bedclothes. Peritonitis and metritis are the results of faulty douching, the vaginal secretion being carried inwards by too violent irrigation. The writer recommends that douching be carried out with the child in the Sims' position, when the parts can be more thoroughly cleansed, and that the lotion should pass from a can not more than two feet above the level of the child's body through a soft rubber catheter extending not more than one inch beyond the vaginal orifice.

Emotional Dyspepsia.

O. Rosenbach in the British Medical Journal says the prognosis is more favourable in this than in any other nervous dyspepsia if the patient has not become hypochondriacal owing to the long duration of the ailment, or owing to a neurotic predisposition. It is unfavourable when he broods over it, suspecting some severe organic disease, but even here it is not hopeless. It is important to investigate the digestive processes, as the proof that the food stuffs are really digested almost always make a favourable impression on the patient. It is better here not to give a test meal, but to withdraw a portion of the stomach contents after the midday meal, for the patient is often at his worst in the morning. Treatment is particularly successful when a single emotion has been the cause of the dyspepsia; the success of treatment is interfered with by successive shocks. The demands made upon the stomach should be diminished as much as possible after any emotional shock, but a total abstinence from food is undesirable, unless there is a loathing for it. A certain amount of occupation, walking exercise, and light muscular gymnastics is in most instances to be recommended, but both mental and bodily fatigue are to be avoided. Drinking warm water, and warm applications to the epigastrium, are employed to counteract symptoms of colic and spasms. Cold food, &c., should be avoided. The author says that small doses of narcotic and sedative remedies, such as opium and belladonna, are useful when given not on a full stomach. Even a small quantity of Cognac

is recommended under the circumstances. When digestion is considerably prolonged, washing out the stomach is serviceable, or when that is not practicable, pepsine and hydrochloric acid may be given. Sodium bicarbonate can be given in sour eructations, but this remedy can easily be abused. The modern method of over-feeding is never employed by the author in this affection, even if there is wasting. In cases of marked hyperæsthesia of the stomach, cocaine may be given with good results. Treatment directed to the mental condition is often more efficient than the use of the prepared food stuffs so popular at present. Prophylaxis is not to be overlooked, and here the author again recommends the use of small doses of opium, belladonna, or Cognac, &c. Some interval should be allowed to elapse after the emotional shock before much food is taken.

The Office Should Seek the Man and Not the Man the Office.

Physicians as a rule are modest men, having a great respect for the rule that formerly was said to govern politics—that "the office should seek the man and not man the office." In these days however the desire for office is so great that no matter whether a pecuniary gain accompanies the position or not, the fervor to be an office holder is quite apparent.

Whilst we would prefer to abide by the rule above quoted, we are constrained to ask the question are we as physicians doing ourselves justice, and performing the duties belonging to good citizenship by rigidly adhering to this idea?

School boards, or boards of education exist in most towns and cities, and have the purview of the education of the youth, and sanitary surroundings of the school houses of the district. In many instances a condition of things exist that from a sanitary point of view is detrimental to all concerned. If the teacher is competent and recognizes the environment. frequently nothing can be done but to exclaim of the trustees

"By your laws, your actions and your speech,
You contradict the very things I teach."

If on the other hand the teacher does not condemn the things that should be condemned, then the teacher is not fit for the position. This criticism applies not only to the sanitary condition of the school house and out-buildings but also to the heating, lighting and arrangement of seats, and black-boards within the school-rooms.

The ordinary school board trustee has not had the experience or the education fitting him to judge of the merits or need of any plans for betterment suggested, but if the term work is done, so as to satisfy the State law, and the teacher's salary is kept to the minimum, he thinks he is entitled to the benediction of "well done good and faithful servant," yet as physicians we know, and frequently we are the only persons in the community who recognize, that such unsanitary conditions as are here only alluded to, are detrimental to the physical, mental and moral well being of the pupils, and that the usual book cramming under such conditions is a libel on the true meaning of education.

Most of the sanitary work of the past has been done by the medical profession, and as yet there are but few available persons who can take up this work satisfactorily. Are we not in duty bound to continue acting as the sanitary guardians of the public, and by becoming members of school boards, obtain by the authority of the law the speedy banishment of unhygienic surroundings from our school houses and their environs?

A. H.

Shock After Abdominal Operations.

Dr. A. L. Smith, in the Canada Medical Record, has a paper on this subject. The following is a summary:

1. Shock is a powerful irritation of the great sympathetic, causing anæmia of the brain and heart and lowering of temperature.

2. The same results may be obtained by too much blood being lost during the operation, owing to defective hæmostasis.

3. The same results may be obtained by hæmorrhage into the abdominal veins, by the sudden removal of large tumors or quantities of ascitic fluid.

4. Shock is often due to prolonged anæsthesia in a badly ventilated room. Not a moment should be wasted during anæsthesia.

5. Depression of vital powers may also be due to prolonged exposure in wet clothing: the patient should be kept warm and dry.

6. Anæmia of brain can be prevented by operating in Trendelenburg posture; anæmia of heart can be prevented by having the arteries well filled before the operation, and by filling the abdomen with normal salt solution during the operation or by rectal enemas of salt solution after operation.

7. The administration of strychnine in doses of 1-20 grain for three days before and three days after the operation dimin-

ishes danger of shock, partly because it keeps the intestines contracted and thus saves them from being handled; partly because it stimulates even a badly-fed heart to contract.

8. Important organs, such as the uterus, or kidney, or even large segments of intestines, can be removed almost without shock provided the operation is performed quickly, with little hæmorrhage, and without much handling or exposure of the intestines.

Some of the Sequelæ Following Supravaginal Hysterectomy By the Baer Method.

Dr. R. B. Hall, of Cincinnati, (Obstetrical and Gyneological Association, Aug. 20, 1897,) referred to the objections to the extraperitoneal method, and then spoke rather more in detail of total extirpation. He was one of the first to advocate and perform this operation, and had obtained excellent results from it. But it does not meet his ideas of a perfect operation; the final results are good, but there is a primary difficulty which is disagreeable. Suppuration necessarily takes place about the ligatures on the sixth or seventh day, causing a slight rise of temperature. To overcome this he uses specially prepared catgut for the ligatures below the peritoneum. He finds catgut unreliable during the other steps of the operation on account of the danger from hemorrhage through slipping of the knots, and so he has abandoned its use.

In 1895, after seeing Dr. Kelly, of Baltimore, perform the supravaginal operation, with his modifications of Baer's technic, Dr. Hall adopted that method. He had operated in this way forty-six times, but was not pleased with the results. Eleven of the patients had post-operative sequelæ, due to the presence of the buried ligatures. All the patients made a good primary recovery, only one showing any signs of trouble earlier than the seventh week. This one had a discharge of pus from the vagina at the end of the fourth week. The discharge disappeared, to return again at intervals of a few days to four or five weeks, and only ceased when the ligatures were removed. The other patients suffered in a similar way, except that they did not experience any trouble from the ligatures until from four to eleven months after the operation. Within a few days after the ligatures were removed the patients were well and remained so, except in two instances. These two, one sixteen and the other eighteen months subsequent to the operation, are still having trouble, as all the ligatures have not come away. He knew the suture material was not at fault as, otherwise, there would have been trouble immediately following the operation. Besides the same material was used in other operations and no trouble resulted. He believes that a large percentage of the patients so operated upon will certainly experience this trouble. The general surgeons are abandoning the use of silk, silk-worm gut, and silver wire in Bassini's operation for this very reason, and it is only logical that the gynecologist in his line of work will have to do the same.

Artificial Food Preparations.

Klemperer mentions (British Medical Journal) that these preparations may be made from albuminous, carbohydrate and fatty bodies, but that the first named are most often employed. Albuminous substances are no longer regarded as possessing the enormous value for nutritive purposes formerly attributed to them. As regards albuminous artificial foods, it was attempted formerly to convert all the albuminous substances into peptones, but it was found that pure peptone irritated the stomach and might produce diarrhœa. Then it was recognised that in gastric digestion the process did not always end in the formation of peptones, but stopped short at the albumose stage. In most of the preparations now made bearing the name of peptone there is a large proportion of albumoses and little peptone. By the introduction into the body of such albumoses the work of digestion is lightened, but this saving to the stomach is not always desirable. Even when hydrochloric acid is absent from the stomach a sufficient conversion of albuminous food stuffs into peptone and albumose occurs. What the stomach cannot accomplish is effected by the intestine. The author states that all finely divided or soluble native albumens are as valuable as the same amount of albumose. Albuminous substances powdered or in a soluble form are thoroughly to be recommended in most cases. Soluble albumens have recently been introduced in the form of nutrose and eukasin.

Klemperer discusses the question of the quantity of these artificial food stuffs to be provided, and contrasts the price paid for the amount which would correspond in nutritive valuable to ordinary articles of diet. Nutrose and eukasin form an important advance here, but there are very few cases in which they are required. The meat ex-

tract preparations contain only some 20 per cent. of the albuminous substances in meat. The constituents of meat extracts are harmful to the gouty, to those with renal disease, etc. The meat juice of Dr. Scholl contains 33 per cent. albuminous bodies, 21 per cent. native albumen, etc., and is thus preferable to many meat extracts. According to present opinion, carbohydrates are very necessary to the debilitated and to the febrile.

Here allusion is made to the various forms of flour (leguminose, etc.) prepared as soups; they are valuable in the feeding of patients. The author refers to the artificially prepared carbohydrate food stuffs containing dextrin, maltose, etc. When salivary digestion is at fault, these preparations are of value. In adults the author thinks it is rarely necessary to substitute the artificially digested for the natural carbohydrate food stuffs. Malt extract is of considerable value as it contains 53 per cent. sugar and 15 per cent. dextrin, but there are substances like honey which are much cheaper and for most individuals equally good. The author employs honey, milk, sugar and similar preparations. He thinks that the use of beer containing peptones is illusory. There are so many good fatty preparations such as butter, cream, cod-liver oil, etc., that artificial preparations are almost unnecessary.

Lipanin is a valuable preparation, but is it necessary to save the body the work of splitting up fats? The author thinks that it is very desirable to return more to natural instead of artificial products.

Gonococcosis.

De Aulnay has published an exhaustive pamphlet on the diseases produced by the gonococcus (a name which he suggests should be modified). He includes tabulated lists showing the order of frequency of infection of various regions in men and women, together with much additional statistical matter. He distinguishes the local and general effects of the micro-organism under the names of gonococcitis and gonococcie, applying that of gonococcosis to the whole subject. He points out that the local effects are produced by the growth of the diplococcus mainly upon mucous membranes, where it brews a toxin which can be absorbed by the circulatory stream. The micro-organism rapidly invades the tissues, particularly the most friable, the cylindrical and serous epithelia, and spreads to the adjoining mucous membranes either by direct cellular infection or by means of the superficial lymphatics. It has considerable powers of penetration, whereby it perforates the vascular walls, and after producing local accidents, such as arteritis, phlebitis and lymphangitis, enters those organs which are rich in lymphatics and in small vessels. The authority divides the general effects of the virus into two categories. First comes the action of the toxins, which is mainly expended upon the blood, the kidneys, the nervous system, the skin and the serous membranes, especially of the joints.

Secondly, there is the action of the micro-organisms themselves, which are conveyed in the blood vessels and lymphatics either separately, enveloped in leucocytes, or entangled in emboli, and which manifest their power of rapid growth when in contact with serum. They tend to the production of pus, which is sterile if the gonococcus is alone, infectious if accompanied by other organisms. In the worst cases without obvious cause gonorrhœal pyæmia may develop.

Nephritis and Anti-toxin.

Goodall, in the London Lancet, records three cases, at the Eastern Fever Hospital, of diphtheria occurring in the subjects of nephritis, and treated with anti-toxin, aged six, five, and ten years respectively. He remarks that these three cases are interesting when considered in relation to any supposed effect of anti-toxin on the kidneys. In Cases 1 and 2 the patients were actually suffering from nephritis when the serum was injected and the renal inflammation was in no way aggravated—quite the contrary, in fact, in Case 2. In Case 3 the patient had apparently recovered from the nephritis, but there was a recurrence of the latter four days after the anti-toxin rash had appeared and while it was still present. It is possible that in this case the serum caused a fresh lesion in organs just recovering from an acute inflammation. This is the only case in which he had seen nephritis follow an injection of serum (though in one case of hæmorrhagic diphtheria he had observed hæmaturia), and the symptoms lasted only for five days. But diphtheria occurring during the third or fourth week after an attack of scarlet fever is occasionally coincident with the onset of nephritis, and it is to be noted that in Case 1 a relapse of nephritis accompanied the secondary diphtheria, the symptoms being observed before the administration of anti-toxin. Indeed, now and then a case of scarlatinal nephritis relapses from no apparent cause.

The Mutual Relations of Pathology and Therapeutics.

Dr. Robert, of Barcelona, delivered an address at the Twelfth International Medical Congress, August 22, 1897, with this title. (Medical Record.):

The cell, he said, is the unit of being. Every function is dependent upon the integrity of the cell, upon its condition of nutrition, and upon its power of reaction against external influences. Pathology consists in the study of disturbed cellular life, of the disturbed relations between the nucleus and the protoplasm of the cell body. The more we study cellular pathology and the greater reliance we place upon its teachings, the more certain is our progress toward the goal of a rational and effective therapy. The treatment of disease must have for its object a rearrangement and a rectification of the disturbed relations between the cells and between the different parts of each cell.

Man, however, is more than a mere cellular congeries; he is a being endowed with certain powers of resistance against influences which threaten his well-being or his very existence. Disease is not dependent so directly upon the action of any specific micro-organism as it is upon an increased organic susceptibility. The mystery of disease is still a mystery, and it has not been solved as yet by any of the facts of bacteriology or pathology. One man is affected by disease; another exposed to the same influences escapes unscathed. A neoplasm which is to-day benign in its appearances may to-morrow assume an entirely different aspect and take on all the characters of malignancy. Why is this? We cannot yet answer. The human organism reacts as a whole to the assaults of disease, and not by the isolated action of any individual cell or group of cells. A specific infectious disease is warded off or overcome, not by phagocytosis alone and not by the special medical properties of the blood serum alone, but it is conquered by the organism considered as an entity.

Our therapeutic efforts must be directed in a way to furnish aid to the entire organism in its struggle against disease, to strengthen its innate powers of resistance, and not merely to fortify one of the approaches, leaving the others unguarded. The indications of a rational treatment of disease are to combat the influences which have weakened the body and so have predisposed it to yield to the assaults of the morbific agents; to support and increase the cellular energies; to strengthen and stimulate the function of those organs whose office it is to preside over metabolism and furnish a suitable pabulum to the rest of the body; and to protect the sensitive nervous system, upon whose integrity so much depends against injury.

The so-called casual treatment of disease is not always effective and its advantages are often illusory. In our well-meant efforts to repress and expel the causes of disease, we may easily go too far and injure the already weakened organism in its resistant powers. It will be of little avail to annihilate the greater part of the attacking force if we thereby so weaken the defence that it is unable to resist the small remnant of the enemy which has escaped the action of our destructive agents.

We must rather imitate nature in her therapeutic efforts, which, after all, are so often effective. The modern treatment of diphtheria by means of injections of a specially prepared antitoxic serum is an imitation of a nature and is a brilliant exemplification, the orator maintained, of the wisdom of this course. The triumphs of orrhotherapy in the management of diphtheria have been great and indisputable.

In health as in disease all the organs work together, and it is in a disregard of this great truth that the chief danger of specialism exists. The specialist is too wont to consider the needs of one system or of one organ in a system, separating it from the body as a whole. This danger is an imminent one at the present day, and it is one against which the true scientific physician must never be weary of protesting. The therapist must be a man of broad views, and, however small and apparently circumscribed is the lesion he is called upon to treat, he must keep ever before him the sufferings of the entire organism, and must recognize and act upon the unquestionable fact that man is a unit and that we cannot hope to treat with success a part while ignoring the whole.

The nervous system must be strengthened and enabled to act its part in the struggle against disease. This most vital part of the human organism is not influenced by medication alone, but there is here room for that imponderable therapeutic agent which is personal to each physician and which finds expression in his moral influence over the patient. To fulfil in the highest degree his divine mission the true therapeutist must be a physician of the mind as well as of the body; he must be able to inspire in his patient that confidence in himself and that hope in the efficacy of his remedies without which his best directed efforts will scarcely avail.

Chronic Articular Rheumatism.

According to the N. Y. Med. Journal Dr. Baumler at the recent meeting of the German Congress of Internal Medicine endeavored to show that in nearly every country this term served to designate a peculiar clinical syndrone; that the chronic articular rheumatism of the French authors was, in Germany, the chronic form of acute articular rheumatism and corresponds to arthritis deformans; that this term arthritis deformans was understood in a different way by physicians and surgeons. In order, therefore, to avoid confusion and to establish an absolute distinction between acute articular rheumatism and chronic articular rheumatism, two affections which were in all points distinct one from the other. Baumler proposed to designate the latter under the term arthritis deformans. Under this term, or polyarthritis deformans, then, Baumler comprises the cases of chronic arthritis of subacute evolution which were often prolonged for many years, habitually apyretic, attacking a large number of the articulations, and causing very pronounced deformities in them.

The symptomatology of polyarthritis deformans was well known, and Baumler could add nothing to it. The patients, he said, were more or less powerless, cachectic or somewhat given to embonpoint. In all cases there was to be found atrophy of the muscles in connection with the diseased joints. The shin, especially on the deformed fingers, was thin, shiny, tense, and often pigmented near the groove of the nail, which sometimes presented stripes running lengthwise or across it. The skin of the palmar surface was red and hot and seemed moist. Characteristic crackings were found in the diseased articulations, which were produced on movement and were caused by the rubbing of the denuded articular surfaces. The articular capsule was thick, the synoval membrane was proliferous, and the articular extremities were deformed, and were dislocated or subluxated one upon the other. There was very little or no fever, unless there was a complication or an attack of arthritis in an articulation previously free from disease. Nutritive disturbances were generally absent; glycosuria and albuminuria, when they existed, were the result of complications.

The anatomo pathological lesions, said Baumler, varied with the evolution of the disease. In the beginning there were to be found only a thinkening of the capsule, an intracellular effusion, and, sometimes, proliferation of the cartilage. Later the cartilage was destroyed; but on the border, in consequence of modifications in the pressure, there was proliferation of the cartilage with partial ossification. There were modifications of the pressure which brought about atrophy and hypertrophy of the bony parts.

The cause, or causes, Baumler said, of polyarthritis deformans, were not yet known exactly, All the conditions which might predispose the patients—poverty, loss of organic liquids, nervous exhaustion, previous articular affections, even acute articular rheumatism—might play a part in the predisposing cases. The disease did not attack the poorer classes in an excessive manner, and it had not been shown that there existed a pathogenic relation between polyarthritis deformans and the organic or functional diseases of the central or peripheral nervous system.

Baumler thought that the bacteriological researches of Schuller, Bannatine, and especially Wohlmann, furnishes a certain basis for the hypothesis of an infectious etiology. Finally, in a disease which lasted for years it was possible that several causes and various infections acted together or successively.

Diet in Typhoid Fever.

Dr. F. C. Shattuck (Jour. Am. Med. Association) says:

"During the twelve years, 1886 to 1897 (both inclusive) 380 cases of typhoid fever have come under my personal care in the Massachusetts General Hospital, From 1886 to 1893, 233 cases were treated under a milk diet with a mortality of 10 per cent. From 1892 to 1897, 147 cases have been treated under a much more extended diet with a mortality of 8.1 per cent. I know well the liability to reach false conclusions, in reasoning from too small figures in a disease like typhoid fever; and it is also true that water has been used more efficiently of late than in former years. But I can see nothing in my figures to contravene my observation that an enlarged diet has not been injurious. I would not be understood as advocating an indiscriminate diet. My plea is simply for treating the patient rather than the disease; for feeding him with reference to his digestive power, rather than solely or mainly with reference to his fever, for the view that the danger of accidents from the local intestinal ulceration is not increased by allowing him to partake of articles which leave no irritating residue, and which cautious trial shows are digested without disturbance or discomfort. At one end of the scale are the cases, with such irritability or weakness of the stomach as to

lead to the unfortunate term gastric fever, or those with pronounced diarrhœa and undigested food in the stools; at the other end are those more numerous cases with clean tongue and a desire for food. Between the two is every gradation. The line of the former may depend on the skill and ingenuity of the doctor, assisted by the intelligent devotion of the nurse. The comfort and the duration of disability of all others may be materially modified for good by careful study and wise individualization of our cases. A long list of permissible articles, from which selection can be made for different cases, and for the same cases at different times under varying circumstances, can be given. That which I append makes no claim to completeness, but is meant merely to be suggestive and illustrative:

"Typhoid Diet.—1. Milk, hot or cold, with or without salt, diluted with lime water, soda water, apollinaris, vichy; peptogenic and peptonized milk; cream and water (*i. e.*, less albumin); milk with white of egg, slip, buttermilk, koumyss, matzoon, milk whey; milk with tea, coffee, cocoa.

"2. Soups: Beef, veal, chicken, tomato, potato, oyster, mutton, pea, bean, squash; carefully strained and thickened with rice (powdered), arrowroot, flour, milk or cream, egg, barley.

"3. Horlick's food, Mellins' food, malted milk, carni-peptone, bovinine, somatose.

"4. Beef juice.

"5. Gruels: Strained cornmeal, crackers, flour, barley-water, toast-water, albumin, water with lemon-juice.

"6. Ice-cream.

"7. Eggs, soft boiled or raw; egg-nog.

"8. Finely minced lean meat, scraped beef. The soft part of raw oysters. Soft crackers with milk or broth. Soft puddings without raisins. Soft toast without crust.

Blanc mange, wine jelly, apple sauce and macaroni."

Early Symptoms of Rachitis.

Dr. A. Jacoby says the very young infant and the young child suffer from rachitis in many ways. Insomnia is quite frequent. Many sleep better when carried about on the arm, because the cerebral congestion is lessened in the erect posture. As soon as they are laid down the brain becomes hyperamic; the child awakes up and makes night hideous. Such children have night terrors on waking up; they are very irritable, easily frightened, peevish or morose and bad-tempered, sometimes to a degree of moral or intellectual insanity. The suspicion of rachitis ought to be aroused when children perspire copiously all over, or mainly on the head. They rub their heads on the pillow to such a degree as to become bald on the occiput. I wish I could impress the necessity of connecting these signs with rachitis, and the advisability of not waiting for all of its most prominent symptoms to appear before the diagnosis is made. The regulation of the diet is the principal remedy, but it is a mistake to believe that a food which does not disturb the bowels is for that reason alone a sufficient nutriment and a safeguard against rachitis.

Treatment of Tubercular Cystitis.

Dr. Banzet formulates in the Archives of Surgery the methods pursued by Guyon and his followers, and covers pretty thoroughly the diagnosis; topic and general treatment; surgical intervention, when best performed; the operation of choice, perineal in men, urethral in women; suprapubic in both; their advantages and disadvantages, and the indications for their performance.

Diagnosis and Prognosis.—There are two general types of the disease, one with sudden onset, accompanied by an eruption of numerous miliary tubercles, bacilli easily found; on the other hand the lesions may be few, rather slow of development, bacilli may be difficult to find or not to be found at all. These latter naturally, in the long run, give a better chance of successful treatment, though cases of the severer type may yield to treatment. Some cases have a tendency to fibrous formation, others to cheesy degeneration. This affects the prognosis. Absence of bacilli does not exclude diagnosis of tubercular cystitis. A spontaneous cystitis, with purulent urine, pain, and frequency, with absence of micro-organisms, points to a tubercular cystitis. Even when large numbers of other micro-organisms are found and no tubercle bacilli, the cystitis may really be of tubercular origin and the micro-organisms due to secondary infection.

As a rule, the cystoscope is better dispensed with. In severe cases with a narrow contracted bladder, it cannot be used with advantage; in milder cases it adds little to the diagnosis, and may bring about a secondary infection.

Local treatment, when carefully applied, is indicated in all cases. Properly conducted, it should not harm the patient. Instrumentation must be thoroughly aseptic; risk of secondary infection is great. Treatment should be applied from the beginning.

Applied by lavage it is harmful, as distention of bladder increases pain and hematuria,and renders patient worse. The best method is by instillation, the fluid being applied drop by drop. The best agent is a watery solution of bichlorid, beginning with a strength of 1–10,000; 1–5000 being the limit of initial dosage. Applications may be made daily, the strength only very gradually increased, seldom passing 1–3000. A single application, too strong, may take some time for its effects to be overcome. Other drugs thus far have proved inferior, lactic acid, iodoform, and formol, the most promising, have proved disappointing. Guaiacol, twenty per cent. in sterilized oil, has proved of use in relieving the pain, but is not curative. Topical treatment should be continued a long time.

General treatment should always be instituted, the indications are to improve nutrition, avoiding drugs which upset the appetite. Climate and salt baths may prove of assistance. Banzet advises against large doses of creosote, smaller dosage and persistent exhibition being better. Guyon's favorite formula for giving it, is:

R Creosote ..... .05 gr.
Iodoform ..... .01 gr.
Sod. arseniat..... .001 gr.
Cynoglosi ..... .05 gr.
Pulv. benzoin, q.s., to make one pill.
M. Sig. Two pills twice daily at meal time.

General treatment may in some few instances prove even curative, instances are cited from the practice of Guyon which go to show in a positive manner the efficacy of general treatment. Banzet warns against putting such cases on a low diet because of a slight albuminuria, a treatment capable of rendering this class of patients much worse.

Surgical interference becomes indicated to relieve intense pain and frequency in these cases in which we are unable to obtain relief by topical combined with general treatment.

Perineal boutonniére, with dilation of posterior urethra, curetting of urethra and vesical neck in men, in women curetting through the urethra, combined with prolonged drainage, has proved particularly efficacious. In the majority of cases these two procedures have procured a marked diminution in pain as well as a rapid improvement in the general condition. The success seems to be more marked in women than in men.

The suprapubic cut should be reserved for those cases where the preceding methods of intervention, followed by renewal of topical treatment, have failed. It cannot, however, be the operation of choice. With a small contracted bladder it is difficult of performance, and the formation of a hypogastric meatus with infiltrated bladder wall is not easy, the curetting of lesions at the bladder neck cannot be so successfully performed as by the perineal route. The advantage in the operation is that we are aided by sight, and some lesions which have escaped the perineal curetting may be found.

In women, in those cases which have resisted all these different methods of treatment, a last resource may be found in the vagino-vesical route.

These operative interventions, having for a first indication the necessity of remedying a functional state which topical treatment has failed to relieve, are not contraindicated where the cystitis is very painful, in those cases where the general condition is grave, or where advanced tubercular lesions in other organs exist.

Puerperal Eclampsia with Special Reference to Treatment.

Dr. W. W. Potter, at the tenth annual meeting of the American Association of Obstetricians and Gynecologists, referred to the views advanced by M. Charpentier at the Geneva Congress last year relative to the treatment of puerperal eclampsia, especially as to the applicability of the induction of premature labor for its relief, and which he said was at variance with those that he had been accustomed to entertain, and the verity of which he had so frequently tested, that he confessed surprise thereat. It was not in any spirit of controversy that he ventured at this time to oppose M. Charpentier's teachings, but simply in the interest of professional progress and science. The author then gave his own views regarding this subject, saying that they were fortified by an experience and observation extending over a period of many years. Furthermore, in the application of the principles he would lay down and advocate, a measure of success had been obtained at his hands that did not present itself under a contrary method previously pursued. The principal object of the paper was to advocate principles which the speaker grouped under the following heads:

1. Though the pathogenesis of eclampsia is unsettled it belongs solely to the pregnant or puerperal state. It is not apoplectic, epileptic or hysteric in character.

2. It depends upon toxemia due to overproduction of toxins and under elimination by the emunctories.

3. These toxins probably have their origin in the ingesta, in intestinal putrefaction, in

fetal metabolism, one or all, and there is coexisting sluggishness, impairment or suspension of elimination.

4. When the prodrones of eclampsia appear, the kidney should be interrogated as to its functions and all symptoms carefully watched.

5. Treatment is preventive and curative. Preventive treatment is medicinal and hygienic; curative treatment is medicinal and obstetric.

6. Milk diet and distilled water should be given in the pre-eclamptic state to dilute the poison, hasten its elimination and nourish the patient.

7. Blood letting should only be employed in plethora or cyanosis. It is liable to cause anemia if persisted in or repeated, whereas red blood corpuscles must be conserved, not wasted. Glonoin diminishes vasomotor spasm, hence may be given freely in appropriate cases. Veratrum viride is a cardiac depressant and a dangerous remedy if pushed to an extent that will control convulsions.

8. Eclampsia is the expression of a further maternal intolerance of the fetus; hence as a prime measure the uterus should be speedily emptied of its contents.

9. Medicinal treatment alone is delusive, is fraught with danger to both mother and fetus; whereas in the prompt induction of labor is found a rational application of science to a desperate condition.

10. Finally, it furnishes, in the present state of our knowledge, the only basis of expectation for a diminished mortality in a toxemic disease of high death rate.

The Folly of an Exclusive Meat Diet.

The non-digestion of starch is unquestionably one of the most common causes of disordered digestion.

This is doubtless the chief cause of the extensive use of beef and other forms of flesh food in this country. Meat is readily dissolved in the stomach, and its digestion is not accompanied by the flatulence, acidity, and other distressing symptoms present in amylaceous dyspepsia.

A beef diet is the most ready means of obtaining relief from these annoying symptoms, and hence is one of the most common diet prescriptions made by physicians, and one which is, perhaps, more frequently than any other, made use of by patients for themselves.

The result is relief from a certain set of symptoms, but at the same time the development of others which, if less disagreeable, are in the end not less serious.

An exclusixe meat diet robs the system of its proper supply of fat, and overwhelms the body with a great quantity of ptomaines, leucomaines, and of tissue poisons, which decrease the resistance of the body to disease.

Bouchard, Rogers and others have shown that the poison-destroying function of the liver depends upon the amount of glycogen which it contains.

This is almost exclusively derived from the starch of "farinaceous foods," hence a person who, in consequence of inability to digest starch, confines himself largely to meat diet, is exposed to the double injury—the introduction of toxic substances into the system and the lessened ability to destroy toxines and ptomaines.

The dyspeptic who is suffering from the inability to digest starch, in exchanging a farinaceous for a flesh diet simply exchanges one class of morbid conditions for another, the biliousness or general toxæmia, the uric acid diathesis, and the resulting rheumatism, neurasthenia and allied conditions which proceed from a meat diet being far more serious in their ultimate effects than the acidity, flatulence, and other annoying symptoms experienced from the indigestion of starch. The fermentation of proteids in the stomach, intestines, and colon, which always accompanies a flesh diet, produces toxic substances of a peculiar character, while the fermentation of starch results in the formation of acids and gasses which are annoying and irritating, but not to any degree toxic.

The substitution of a meat diet for one consisting of farinaceous foods, while a convenient mode of dissipating certain unpleasant symptoms, is, nevertheless, not the best remedy for this condition.

What the patient requires is not the withdrawal of starchy foods, but the ability to digest them.

Organic Heart Disease During Pregnancy and Labor.

The American Medico-Surgical Bulletin says: W. W. Lea has called attention to the danger of organic heart disease during pregnancy and labor, and reports seven such cases coming under his personal observation. Three of these patients died. It is known that there is a certain amount of dilatation in normal hearts during pregnancy as a result of the increased amount of blood and the greater blood pressure. Valvular disease causes at times excessive dilatation and even fatty degeneration in the heart muscle itself. In the periods between pregnancies the symptoms at times entirely disappear.

In the cases where heart-lesions exist there is always a marked tendency to abortion or premature labor. In cases of mitral stenosis the period of greatest danger for the patient is immediately after the birth and during the first few days of the puerperium; death from such conditions has, however, occurred as late as six months after confinement, When compensatory disturbances occur as early as the third month induced abortion appears to be indicated; the symptoms, as a matter of fact, rarely appear before the fifth month. Digitalis and strophanthus should be given in these cases, the dangers of induced premature labor being greater than expectant treatment. The duration of labor should be shortened as much as possible. In cases of marked cardiac weakness immediately after labor, nitrate of amyl is to be given; but in some instances treatment is of little avail. During the puerperium absolute quiet should be enjoined, and digitalis given as required.

Discovery of the Microbe of Yellow Fever.

Sanarelli claims to have isolated the germ of this disease. He calls it provisionally the "bacillus icteroides," and says it must be looked for in the blood and tissues and not in the intestinal canal, in which indeed he has never encountered it. Its isolation is for stated reasons possible in only about fifty-eight per cent. of cases. These reasons are that in the beginning of the disease it multiplies very little in the human organism, a very small quantity of its toxin being sufficient to provoke in man the worst type of the disease, and that its toxin facilitates in an extraordinary manner every sort of secondary infection. The bacillus is a little rod with rounded extremities. It is best obtained by placing a fragment of the liver of a fresh cadaver in the incubator at 37 deg. C. for twelve hours. Cultures on agar-agar grown in the incubator at 37 deg. C. present an appearance that does not differ from that of many other species of microbes. But if these cultures are allowed to grow at a temperature of from 20 deg. to 22 deg. C. they appear like drops of milk, opaque, projecting, and with pearly reflections; in fact quite distinct from those grown at 37 deg. C. This peculiarity is specific, and by this means a bacteriological diagnosis may be made within twenty-four hours. The microbe is a facultative anærobe and is pathogenic for many of the domestic animals. The virus injected into the vein of a dog produces results which clinically resemble closely the symptoms of human yellow fever, and the lesions found after death are almost identical with those observed in the human cadaver; there is intense fatty degeneration of the liver, severe fatty degeneratien of the kidneys with the lesions of acute perenchymatous nephritis, and the lesions of intense gastro-enteritis. The patient with yellow fever is menaced by three imminent dangers:

1. Specific infection with the virus of the "bacillus icteroides."
2. Secondary septicæmia.
3. Renal insufficiency.

The "black vomit" is due to the action of the gastric acid upon extravasated blood in the stomach, and the vomiting itself is provoked by the emetic action of the toxins of the "bacillus icteroides" circulating in the blood.

The disease may be transmitted experimentally even by the respiratory tract to rabbits and guinea pigs, so it is possible that the contagion may be transmitted to man by means of the air.

The virus possesses those chief pathogenic properties.

1. The steatogenous: the intense fatty degeneration of the liver cells produces an obstacle to the free course of the bile and favours its resorption—hence the jaundice.
2. The congestive and hæmorrhage producing properties—hence the black vomit and other hæmorrhages from mucous membranes, and the vascular congestions which are the cause of the headache, backache and liverache.
3. The emetic properties.

The toxin obtained by filtering cultures in broth twenty to twenty-five days old was found to reproduce in the dog the same symptoms and lesions as the virus. Five injections of sterilized and filtered cultures were made under the skln and into the veins of man, and produced typical yellow fever. He made a curious and original observation which seems to explain the mysterious longevity and resistance of the "bacillus icteroides" on board ships—especially old, rotten and badly ventilated ones. The microbe is often incapable of multiplying on a layer of common gelatin; but if a mould is made to grow in its vicinity, scarcely has the mould begun to grow when little colonies of "bacillus icteroides" spring up around it. He suggests that in localities where yellow fever takes hold with great vigor there may possibly be a mould, hitherto unrecognized, which favors the growth of the microbe. Moisture with heat represents the best condition for the formation of moulds and moulds are abundant in old damp and badly ventilated ships.

Another point of interest is the longevity of the bacillus in sea water which might help to explain the tenacious persistence of

yellow fever in maritime localities afflicted by the presence of its specific agent. Finally, the hope is expressed, that it will soon be possible to apply to man a specific preventive and curative treatment.

Cold Drinks.

In a recent issue of the British Medical Journal an instructive article appears with this title. Among the various discomforts entailed upon us by the hot weather is thirst, which leads to many accidents. First and most especially is the danger arising from the ingestion of ices and cold drinks, which so many people fly to directly they feel hot. Difficult as it may be to explain in precise physiological terms the evil consequences which so often follow the sudden application of cold to the mucous membrane of the stomach when the body is over heated, there is no doubt about the fact, and people would do well to remember the risk they run when they follow their instinct, and endeavour to assuage their thirst by huge draughts of cold fluids or the rapid eating of iced compounds. Ices appear to be especially injurious, doubtless in consequence of the intensity of the shock produced. Other evils, however, besides those connected with local chill are apt to arise from the copious drinking of fluids in hot weather. Drink leads to perspiration, and excessive perspiration, with the consequent tendency to catch cold, is one of the main dangers of hot weather in our changeable climate. Physiologically speaking, no doubt perspiration is one of the normal means by which the animal heat is regulated. But a man wrapped up in thick clothing is hardly in a physiological condition, and when the interstices of that clothing are full of vapour the good influence of perspiration in lowering the temperature is much lessened. On the other hand, its dangers are much increased, for the chill goes on long after the heat is past, and, unless the clothes are quickly changed, rheumatism, bronchitis, and other evils are only too apt to supervene. There can be but little doubt that the profuse perspiration which is the cause of so many dangers is greatly aggravated by drinking, and especially by drinking alcoholic fluids. No one can watch a tennis match without noticing how the men perspire while the girls hardly turn a hair. Some, perhaps, will say that the girls play the feebler game; but game or no game, they exert themselves. The same also may be seen at any dance. The secret is that the men follow their instinct and slake their thirst while the girls simply bear it. It should be remembered that thirst is the result of want of fluid in the blood not want of fluid in the stomach, and that a pint or more may be drunk before a single ounce is absorbed. Any attempt, then, to assuage thirst by rapid drinking must of necessity lead to far more being taken than is wanted, the moral of which is that if we must drink, at least let us drink slowly.

Lady Nurses.

There is a growing tendency in England to discard trained nurses, especially in private practice. The Practitioner has said many things about them that are far from complimentary. In the July number it quotes from The Hospital as follows: "Many medical men, and those of the widest experience and highest authority, will confess that for private nursing they prefer the much abused 'housemaid' nurse, and that is a view which will be cordially echoed by those of the public who have suffered at the hand of her social superior, the 'lady nurse' It is a self-evident fact that ladies do not make the best private nurses, and one which few who have had experience in the management of a private nursing institution will deny." The Practitioner, on its own account, says: "Many people will continue to prefer the ministrations of an intelligent woman who does not disdain to put her hand to anything that will make them comfortable, and who, if she has not the accomplishments, is also free from the affectations of a lady nurse."

Intubation in Diphtheria.

Hughes summarises (Treatment, London, Aug. 12, 1897,) the advantages of this method. It is rapid, and requires no anæsthetic; there is no operation; the respiration takes place through the natural openings. In these days of antitoxin, if there is skilled assistance to rely on during the absence of the operator, it has doubtless enormous advantages over tracheotomy, but these fast disappear when skilled assistance is absent, and it must not be forgotten that tracheotomy tubes can now be removed after a much shorter period than formerly; nor must we fail to bear in mind that Kemenyffy quotes a case of abscess due to the use of an intubation tube; also Gallatti cicatricial stenoses as a sequel, and Bauer two cases of emphysema as a consequence, so that it is not a procedure absolutely devoid of risk. Hughes recommends the classical method of hooking up the epiglottis with the finger, which acts also as a guide to the glottis.

The Continuity of Life.

Prof. Virchaw read a paper with this title at the twelfth International Medical Congress, Aug. 25, 1897 (Med. Record). Life, he said, has no other origin than from life itself, and this is one of the truths which the labors of pathologists and biologists of the present century have established beyond the possibility of doubt. For long many men of acumen and true scientific minds were inclined to doubt the unkroken continuity of life and to regard spontaneous generation as possible if not actually probable. This theory is, however, dead, and dead beyond the possibility of resurrection —a result which we owe to the labors of many earnest investigators, conspicuous among whom stand the grand figure of Louis Pasteur. The role of chemical action in the processes of life or of its continuity has also been found to be less important than it was at one time supposed to be. Life is in the cell. He who speaks of serum as a vital force apart from cells is wrong. The grand truth of cellular succession may be assailed in the future as it has been in the past, but it will never be thrown to earth; it will shine through all the long years of the twentieth century, few if any of which, the venerable speaker said in a half-regretful voice, it would be his privilege to see. This might be his last congress (cries of "No, no!"), but whether it was or not, his earnest hope was that the final mystery of life might be solved and its solution proclaimed at some future congress. If it ever is to be solved, solved it will be by the united labors of the biologists and the pathologists; it is in their laboratory that the key will be forged which shall unlock the door that still holds us back from a full knowledge of the processes of life.

The Practical Bearing of Washing Out the Stomach in Infants.

Washing out the stomach in infants is a perfectly rational method of treatment and deserves to be more frequently employed. (Leo in Pediatrics). It is exceedingly simple and is performed exactly as in the adult. A common soft stomach tube of five millimeters' diameter inside is used, to the upper end of which is attached a rubber tube about one meter long with a funnel. The tube is to be passed while the child sits in its mother's lap, and the washing is at once proceeded with, and continued until the water returns clear. Simple warm water may be used for this purpose. If intestinal symptoms predominate we may add a few cubic centimeters of an alcoholic solution of thymol, and where atony of the stomach is marked the addition of table salt is to be recommended.

The indications for stomach washing are the acute dyspetic conditions under which is grouped simple acute dyspepsia, acute gastritis, and gastro-enteritis. Not infrequently a single washing accomplishes the cessation of vomiting and diarrhea, even where they have existed for several days. If one washing has not the desired effect it is to be repeated once or twice on the following day. The vomiting is most markedly influenced by the operation; besides this, the appetite and general condition improves promptly. Should the diarrhea still continue it is to be treated by diet and internal medication. In typical cholera infantum favorable results from the washings were in most cases not obtained, though in some subacute and even chronic conditions very good results were noted.

Cases of temporary dilatation and great accumulations of gas are usually accompanied by disturbance of appetite, frequently by vomiting, poor nutrition, and anomalies of defecation. The cause of this condition is generally an atony of the walls of the stomach, frequently accompanied by anomalies of its contents. In such cases a repetition of the washings may be necessary; at the same time dietetic, roborant, and other judicious treatment must be combined with it.

Aneurism in Relation to Syphilis.

In order to settle the point in what proportion syphilis is found in aneurismal patients, Dr. Etienre has collected 2000 published cases, of which 240 were tabulated for study. Of the latter number 166, or 69 per cent., were syphilitic. Adding to them the cases of Malmsten, Welch, and Fraenckel (346 in all), the proportion was found to be 70 to 100, much too great for a mere coincidence. Following syphilis, as etiological factors, alcoholism occurred 28 times, malaria 8, rheumatism 7, typhoid fever 5, variola and pneumonia each 2; gout, scarlatina, dysentery, and erysipelas appearing once in 240 instances. Aneurism and syphilitic accidents, or incontestable signs of them, were found coincidently 28 times (11 per cent). Curiously enough, aortic aneurism was found in husband and wife in two observations. All four were syphilitic. Syphilitic lesion of the vessel walls results in arteriosclerosis in plaques, eminently adapted to the development of

sacculation of the trunk attacked, the change beginning in the vasa vasorum. The plaque determines the *locus minoris resistentiæ*. Clinical experience from many sources points to the same exciting cause. Amelioration under iodid is too well known, it seems, to need the extensive consideration given. Its rapidity is often astonishing. The length of the period between infection and appearance of aneurism, in 64 observations, varied from 11 months to 40 years, 10 cases developing in 1 to 5 years, 18, in 5 to 10, 10, in 10 to 15, etc. Speaking generally, aneurism occurs earlier in life when syphilis enters into its genesis, and in that disease, Jaccoud says aneurism is frequently multiple. The anatomical lesion is an arteritis beginning in any coat or a panarteritis involving them all. In the majority of cases, the histology does not differ from that of vessel disease in other conditions. Finally, the author thinks a large number of the cases are parasyphilitic.

Conservation in the Ovary.

Dr. B. Sherwood Dunn (American Association of Obstet. and Gynecologist, Aug. 20, 1897) said that Brown-Séquard believed and taught as a principle of physiology that every gland, whether or not provided with excretive ducts, gives to the blood a certain useful principle, the absence of which is felt and made apparent after their extirpation, or the destruction or modification of their functional activity by disease. The importance of this theory, if it is based upon facts, cannot be overestimated; and if its truth be proved and generally accepted, it certainly will have a modifying influence upon the frequency with which the ovaries are extirpated. From observations based upon the cases of 100 women operated upon at the Broca and St. Louis Hospitals, Paris, the essayist said that when the patient had prematurely lost both ovaries, 78 per cent. subsequently suffered a notable loss of memory, 60 per cent. were troubled with flashes of heat and vertigo, 50 per cent. evinced a change in character, becoming more irritable and less patient, some even being subject to violent and irresponsible fits of temper, 42 per cent. suffered more or less from mental depression, and 10 per cent. were so depressed as to verge upon melancholia. In 75 per cent. there was a diminution in sexual desire, some claiming that they experienced no sexual pleasure at all. Thirteen per cent. were not relieved from the pain from which they had suffered, 35 per cent. increased in weight and became abnormally fat, and some complained of a diminution of the power of vision. Twelve per cent. developed a change in the tone of the voice, it becoming heavier and more masculine in quality, 15 per cent. suffered from irregular attacks of minor skin affections, 25 per cent. had severe headaches, as a rule, increased in intensity at the catamenial period, 25 per cent. complained of the occurrence of nightmare, more or less constant, and about 5 per cent. suffered from insomnia. In a few cases there existed a sexual hyperexcitability not present prior to castration. A few patients, also, developed gastric reflexes and marked indigestion. All of these symptoms or changes were more marked in women under thirty-three years of age,

The doctor said that any skepticism which he may have entertained regarding the theory of ovarian secretion and its usefulness and necessity to equipoise of the entire system had bern entirely dissipated by the results of experiments made with ovarian substance, or ovarine, in patients who have lost both ovaries, or were suffering from troubles which in a greater or less measure were due to a diseased condition of an ovary. He gave the following accumulated evidence in support of his views:

1. Statistics show functional troubles to be more constant and intense in women who have lost both ovaries by operative interference.

2. There is little, if any, modification of these disturbances when the uterus is left in place and both ovaries removed.

3. These troubles are notably less when the uterus is removed and the ovaries left *in situ*.

4. By the favorable results of the experiments of Jayle, Mainzer, Mond, Chrobak, and Muret, in addition to his own, in the administration of ovarian substance, or ovarine, to patients suffering from various forms of disturbance, more or less intense, following double oophorectomy, and, equally, those suffering from functional difficulties due to ovarian diseases.

He is in the habit of giving these patients 2 grains of ovarine, in capsules daily. He deprecated the wholesale sacrifice of both ovaries, and made a plea for more conservative methods. Ignipuncture, according to the method of Pozzi, has given the most satisfactory results in his hands.

A Harmless Way to Cure Over-Fatness.

Dr. W. T. Cathell, in the Maryland Medical Journal, says: Neither with cases of enormous obesity, nor with celebrities of fabulous proportions, nor with over-fat invalids or semi-invalids have I had any ex-

perience whatever, but, if any healthy person weighing less than 300 pounds, with *simple uncomplicated over-fatness*, whether male or female, wishing to make a fair, honest and faithful trial of my plan to diminish over-fatness, will begin and drink a large glass of the artificial Kissingen water sold at drug stores and other soda water fountains, twenty or thirty minutes after each of the three daily meals, one day, and a similar glass of artificial Vichy water after each of the three daily meals the next day, he will begin and gradually lose fat, until he comes down to medium weight and stoutness, and be correspondingly relieved of the discomforts of obesity; after which their use should be discontinued.

These are both cheap waters, and may be taken at the counter, or bought in syphons or in citrate of magnesia bottles, or even in five or six gallon tanks to drink at home. While using them, the person should as a necessity guide, and also for personal satisfaction, keep tally on his or her girth and weight, by taking the chest, (or bust) measure, the waist measure and the hip measure, and carefully weighing his body in the same clothes and on the same accurate scales, every two or three weeks, and if he has lost much more than a couple of pounds for each week, take a smaller glass of each, at every drink, and is he has lost less than a couple of pounds for each week, squeeze a few spoonfuls of lemon juice into each glass of the Kissingen to increase its acidity and also add one teaspoonful of the aromatic spirits of ammonia to each glass of the Vichy to increase its alkalinity.

He should also lend assistance to the action of the waters by using starches, sugars, fats, alcoholics and all other fat-forming food but sparingly, avoid over-eating, and use neither food nor alcoholics except at the regular meals; also take light suppers, so that from then to breakfast, the longest of the three intervals between meals, there may be the least pabulum for fattening; and the best conditions for reduction, and especially that there may be complete emptiness of the stomach during sleep, so that nature may then utilize some of his surplus fat to meet the shortage. He should also take moderate out-door exercise, on foot or wheel, or in any other way that will increase and deepen his respiration.

Injury and Cancer.

Berger, in the British Medical Journal, considers very fully the connection of malignant diseases with injury. His researches have led him to the conclusion that injury is a predisposing factor in the development of cancer, influencing the external manifestation and locality of the disease. The objections to the traumatic origin of cancer—such as, for instance, the rare occurrence of cancer immediately after injury—the negative results of experiments, and the slight value of the patient's report, do not, it is stated, hold good. The form of traumatism predisposing to cancer is not, the author holds, so much a single severe injury as a succession of contusions which give rise to effusions of the blood and impair local nutrition. Prolonged or repeated irritation is more prone to lead to cancer when acting on tissues in a condition of senile involution. In considering the relations of malignant disease and traumatism one must bear in mind, not only the purely causative part taken by the injury, but also the influence of injury in promoting the development of cancer. In cases of cancer following injury an etiological relation certainly exists, the degree of which will vary in different instances. The connection between cancer and injury is not an immediate one, but consists rather of an unbroken series of morbid phenomena, each of which is dependent on its predecessor,

Unusual Localisation of the Secondary Syphilitic Eruption.

Dr. Hutrhinson, Editor of the Archives of Surgery, says: A noteworthy instance of unusual location of the eruption of secondary syphilis has recently been brought under my observation. The patient was a gentleman of middle age. The eruption, which was of the papular type, was so abundant on the nates that, by coalescence, it almost wholly covered them. Yet the skin of the back and abdomen was quite free. Again, the spots were very plentiful on the backs of the forearms and on the elbows, being there arranged exactly like common psoriasis—whilst there were none in the bends of the elbows. There were some on the fronts of the forearms, but they were not nearly so abundant here as on the backs, the reverse, of course, of the rule. The eruption was accurately symmetrical, and in all other respects, excepting its distribution, characteristic of syphilis. It occurred in company with a severe sore throat, and about four months after the chancre. Mercury had been inefficiently used.

Such cases are instructive as teaching us that we must not rely with too much confidence on local distribution as an aid in diagnosis. The syphilitic eruption is often almost limited to the trunk, whilst in other

cases, as in this, it occurs on the four limbs, to the almost entire exemption of the trunk. It is not easy to account for these differences. They are certainly no wholly explained by anything peculiar in the dress or avocations of the patient. It is told of Hebra that he used to amuse himself and his class by making guesses at the vocation of his patients by the distribution of the eruption in cases of scabies. If the nates were covered he would assert "The man is a shoemaker," and would often be right. In the present instance no explanation of this kind was forthcoming.

The Wet-Nurse and the Child of a Syphilitic Father.

The important question regarding the conditions under which we can allow or refuse a wet-nurse to the child of a syphilitic father are discussed by Fournier, whose opinion always carries much weight (Treatment, July 22, 1897). After pointing out the consequences that may ensue to the medical man, if the wet-nurse contracts syphilis from a child after he has given his consent, and that she may transmit the disease to her own husband and children—consequences that may result in an action for damages and serious loss of reputation—Fournier says we have five questions to consider.

(1) *The absence of actual syphilitic lesions.* If actual lesions are present in the father the infant may be infected, or is at least dangerous to the nurse.

(2) *The age of the paternal disease.* In the course of time there is a progressive diminution in the hereditary taint. The syphilitic poison begins by killing the offspring in the early months of pregnancy (abortion); then in the later months; then they are born at term but syphilitic, and likely to die; later they are born healthy, but capable of resisting the poison; finally further pregnancies give birth to infants free from syphilis.

(3) *The quality of the paternal disease*, Mild or severe.

(4) *The lapse of time since the last sign of syphilis in the father to the time of conception.* An infant conceived at or about the time of syphilitic signs in the father is gravely menaced, while when conceived long after the last manifestations it generally escapes.

(5) *The treatment received by the father.* The infant is likely to escape if the father has been methodically treated for a long time. Insufficient treatment of the father causes danger to the infant. In deciding on a wet-nurse the most important considerations are the duration of disease in the father and the treatment he has had. There are many cases where we can say yes or no, but some are difficult to decide. For instance, if the father has been quiescent from syphilis eight or nine years, and was treated well, we can give the child to a wet-nurse; if the disease was contracted one or two years ago and not well treated we cannot give the child to nurse. Doubtful cases are those where the disease was contracted say three years ago and was of medium severity, the treatment being good at first, but afterwards neglected. The condition of the child is uncertain, and it is best to forbid a nurse in such cases.

Fournier is no doubt on the safe side in these questions, but we should say that a patient who had gone through a thorough course of treatment for eighteen months or two years and had been free from symptoms for one year would be safe as regards his offspring in nine cases out of ten. However, there is always the tenth case to consider and it is well to bear this in mind.

Lymph-Adenoma Following Bronchocele and Affecting the Cervical Glands on Both Sides, Attended by Rapidly Increasing Debility with Emaciation—Death Within a Year.

Dr. Jonathan Hutchinson, in Archives of Surgery, reports the history of the following case:

A young lady of 22 was sent to me on account of great enlargement of the cervical glands in both sides of neck, on April 1, 1889. The glands were very hard but not adherent. The cluster passed very deeply into the root of the neck, and although it was stated that they had been observed only a few months, I did not feel inclined to sanction the formidable operation which would have been required for their removal. She was in feeble health, and was said to have been failing in strength and losing flesh for some months before the glands began to enlarge. She had also formerly had some enlargement of the thyroid. An aunt had had cancer of the breast, but on the whole her family history was good.

In spite of every possible advantage, as regards changs of place and constitutional treatment, the health failed rapidly and death occurred in November of the following year. The condition of the glands had varied. Some would subside and others enlarge, but on the whole they had increased. No affection of the spleen had been recognized.

Herpes and Tuberculosis.

Rouher(The British Medical Journal)has recently published some interesting details bearing upon a possible relation between zona and tuberculosis. It may appear under three differenr conditions: First, toward the end of severe pulmonary tubercle, and it is then of no special interest, but in other cases it is a very early symptom, and may, according to the writer, be looked upon as a premonitory sign. Thus, he quotes cases of patients subject to herpes zoster but who did not complain of any pulmonary affection. On examination of the lungs, however, early tuberculosis was discovered. In other cases, forming the third group, the signs of pulmonary tubercle may be discovered after a short interval, there being no physical indication at the time of the eruption. Although zona seems to affect neuropathic or neuro-arthritic subjects, it results, from the author's observations, that in every case of this disease the patient should be kept under observation, more particularly as concerns the lungs. The author points out the extreme importance and utility of this question should it be supported by more extensive observations.

The Poultice.

How often we tell the mother of one of our child patients: "Apply a poultice to such and such a part of the child's anatomy" and we never stop to think, what a poultice really is, of what material it is made, or how it should be applied, or how it should act when properly applied. What we want a poultice to do, is to apply hot moist soothing heat to the affected part, not only externally but to the deeper structures and in that way allay pain and discomfort. How often do we see a child, crying, fretful and full of pain, who on the application of a properly made poultice, stops it's crying and fretting,thereby paying a child's greatest compliment to your skill and judgement by going quickly and restfully to sleep. You order a flax-seed poultice; they send to the Drug Store and in eight cases out of ten, get a dust colored, mouldy ill-smelling mass called by courtesy Ground flaxseed, which when mixed in a bowl with more or less *tepid* water is named "A Poultice," and then you "wonder why" you do not get any good results from the application. Stop and think for a moment if it is any wonder, but who is to blame, nobody but yourself; you have left it to the poor mother, who did not know any better, and you have the only results possible, *a dismal failure*. Now, how to make a good poultice is a very simple matter, only like every thing else, that is to be done properly, it takes a little time and trouble; *but the results are not dismal failures*. For each pound of flaxseed (finely and freshly ground) used, I put in half an ounce of Menthol Crystals, ten grains of powdered Opium and one ounce of pure Alcohol, which I mix carefully together, so that the Opium and Menthol Crystals are thoroughly dissolved in the Alcohol. Then to each pound of flaxseed used, I add one ounce of Linseed Oil, which I work in carefully till all the oil is absorbed by the flaxseed. Then the *two* mixtures are carefully blended together and are ready for use. The mixture keeps moist and prepared for instance use for any length of time if kept air-tight. When you want a poultice made by this method, all you have to do is take out enough of this mixture from your tin box or glass bottle, mix it with a sufficient quantity of *boiling water* and behold you have a poultice fit "for the Gods." Try it and be convinced.

J. D. H.

"Carding" the Sciatic Nerve.

The operation of "carding," or "harrowing," the sciatic nerve for very obstinate sciatica, says the Lancet, was first performed by Dr. Delagéniére, of Mans, about a year ago. It was supposed that the cause of the pain in this case was a varicose condition of the veins surrounding the nerve. The intention was to excise these veins after the method recommended by by Quénu, but when the nerve was exposed instead of the varix he expected he found only a number of small serpiginous vessels running along it, causing the surface to present a furrowed appearance. It was obviously impossible to ligature and resect these, so he contented himself with teasing, or carding, the fibres with a blunt forceps throughout the whole exposed portion of the nerve, in the hope of destroying the vessels existing in its deeper parts and of thus being able to put an end to the statis in the venous twigs. The result was that the patient was cured. This, says the writer, encouraged another French surgeon, Dr. Gérard-Marchand, to attempt a similar process which he denominates *hersage*, or "harrowing," in sciatica where there was no reason to suppose that a varicose condition existed. The first case was that of a woman, aged thirty-seven years, who was unable to sleep or to stand upright, characteristic scoliosis being present. There were no signs of varicose veins or of hysteria. The second was that of a man, aged forty-

five years, with a very old-standing sciatica, no treatment having been of any avail. Here also there were no varicose veins. The operation, which was similar in the two cases, was performed under chloroform anæsthesia, and consisted in exposing the nerve and teasing apart its fibres for a distance of two centimetres by means of a grooved director. The appearances were normal, there being no discoloration and no dilatation of the vessels. After the *hersage* the nerve was flattened out to twice its ordinary breadth. A drainage-tube was inserted and the wound sutured and dressed with iodoform and absorbent cotton. For several days the patients complained of pain in the nerve and of numbness in the limb. The pain, however, gradually passed off and sensation returned, complete recovery resulting in both cases. From experiments on animals, continues the writer, Dr. Gérard-Marchand has been led to conclude that *hersage* of the sciatica nerve produces temporary loss of sensation in the nerve, while the motor power is not interfered with. He suggests that probably this operation may be found of value in the case of other neuralgias which have resisted all ordinary treatment.

Prolonged Diphtheria.

Dr. Jessen, in the London Lancet, refers to the rare cases in which clinical manifestations of the diphtheritic process in the upper air passages persist for a long time. There are but few reported cases of this chronic diphtheria. The author records the following case in a girl, aged 19, who first fell ill with a facial erysipelas. This soon got well, but a few days later an ulcerated patch appeared on the right side of the palate. The glands were enlarged, and the temperature was 39.5 degrees C. Virulent diphtheria bacilli were found in the exudation. In the further progress of the case exudation appeared on the posterior pharyngeal wall, and in the nasopharynx and right nostril, but there was no fever and no albuminuria. Four weeks after the onset there was a definite paresis of the right half of the soft palate. The exudation varied its position, but as time went on its intensity diminished. Verulent diphtheria bacilli were constantly found in the exudation. An injection of 1,500 units of diphtheria serum had no effect on the local lesion, and the same was true of local treatment with all the ordinary applications. Lactic acid destroyed the exudation rapidly, but it formed again. Four months after the onset there was an infiltration of the mucous membrane where the exudation had been, and there were still several white patches in the pharynx not easily detached. The exudation was fibrino-purulent in character, and contained diphtheria bacilli. It is interesting to note that notwithstanding the presence during four months of a local lesion containing virulent diphtheria bacilli, there were practically no general symptoms. Some five months after the onset the exudation disappeared, and the infiltration of the mucous membrane began to diminish.

Pathogeny of Obstetric Paralysis.

From examinations thus far made, it seems to be well established that obstetric paralysis of the upper extremity is a paralysis affecting the roots of the fifth and sixth cervical nerves. (Fieux, Annales de Gyn.) But it is not easy to understand how the two superior roots of the brachial plexus can be injured while the others wholly escape. Roullard believes this phenomenon would be produced by compression at the point of Erb. This is Budin's opinion. Fieux does not accept the mechanism invoked by these authors. From an experience of four cases his views from both the anatomical and the clinical standpoints are that the theory of compression at the point of Erb must be abandoned. He would refer the injury rather to stretching of the two superior branches of the plexus by asynclitic traction.

Prouff of Morlaix has observed thirty cases of obstetric paralysis, all extractions by the feet and by the same midwife. Twelve of these he had studied in detail. In these he found lesions of the shoulder, of the elbow and of the wrists which gave evidence of powerful and maladroit tractions on the arms. In many instances he assumes delivery was effected by podalic version and extraction through an imperfectly dilated cervix. Other injuries sometimes occur in such deliveries, such as hematoma of the sterno-cleidomastoid, stretching of the phrenic of the spinal and of the pneumogastric nerve, lesions, etc., to which the rapid death of the child after extraction is often due.

In nearly every case Guillemot has noted an elevation of the scapula on the injured side, indicating a lesion of the nervous branch springing from the third cervical near the point of union with the fourth, since this supplies the inferior part of the trapezius, which is the seat of the paralysis. He thinks the injury is due to stretching.

That the motor nerves alone, and not the

sensory as well, are involved, he attributes to the fact that in the direct traction on the head, without Mauriceau's manœuvre, the head being partially extended, the posterior sensory nerves are less tense than the motor.

Nasal Asthma and Emphysema.

According to the Louisville Medical Monthly Dr. Stech lays down the rule that bronchial spasm is the first, bronchitis the second, and over-distension of the lungs the third manifestation of the asthmatic attack. This over-distension of the lung disappears more or less rapidly, so that there can be no question of emphysema in the anatomical sense. The asthmatic attack may be indefinitely prolonged, so that the dyspnœa persists, and is aggravated at night. The author says that these patients when advanced in life are regarded as the subjects of emphysema, and are so treated, and yet profound changes may be present in the nose, of which not even the patient himself is aware. Here, after the removal of polypi, etc., the condition may be improved, but never perfectly cured. The author would conclude that after asthmatic attacks lasting for years emphysema in the anatomical sense may occur in elderly people, but never within his experience in young subjects. The dyspnœa of emphysema is too often attributed to asthma. Whilst bronchial asthma of nasal origin occurs when the patient is at rest, and especially at night, the dyspnœa of emphysema mostly appears on exertion. The author maintains that in nasal asthma the bronchial asthma may even occur on one side only. Nasal asthma may appear in an incomplete form, and is often hidden under the appearance of a chronic bronchitis. The author would look upon this asthma as a neurosis, as its rapid disappearance after nasal treatment would show.

Alterations of the Blood in Syphilis.

Justus (British Journal of Dermatology) has made a special study of the anemia, well recognized as occurring early in syphilitic infection. He finds that the percentage of hemoglobin undergoes regular fluctuations commencing with the appearance of general glandular enlargement. It decreases slowly and steadily to its limit at the time of the secondary accidents. If the patient remains untreated, it increases to its normal level in health with their subsidence. Syphilis therefore destroys the hemoglobin which is built up again as the patient recovers spontaneously. With the administration, however, of a fairly large dose of mercury, the percentage drops immediately, to recover in a number of days proportionate to the virulence of the disease and the state of the patient. With every succeeding dose the drop is less marked until after a thorough course of murcurials the amount is greater than before the administration of the drug. The subsidence of the early accidents is coincident with the increase in resisting power of the hemoglobin, the disease itself causing temporary diminution of that power as regards mercury, * * * Valerio from a study of five cases reaches practically the results of Justus. He says that the alkalinity, density and the chlorids in the blood are diminished in addition. As in previous researches, the author states that the globular resistance of the blood is proportionate to its richness in the chlorids of sodium and potassium. The biniodid of mercury, all things being equal, is more powerful in restoring the blood to its normal state than the protiodid.

Common Sense in the Use of Antiseptics.

The following incident came to the knowledge of the writer recently, and as it is a matter of common occurrence I will relate it:

A lady was about to have a laporatomy done at a prominent hospital; the surgeon was a young man and a good surgeon, and of course was well up in the use of antiseptics. The patient had been well prepared on the morning of the operation, and had been given the anæsthetic, and was thoroughly under its influence. It was time for the operation to begin, and yet the surgeon spent twenty minutes with a stiff brush, scouring the abdomen until it bled, and then took ten minutes more to sterilize his hands, thus consuming thirty minutes time which should have been given to the patient. This is more than wrong, for this thirty minutes belonged to the patient, and should have been given to her; and this thirty minutes in a critical operation might have turned the scale against the patient. I like the plan which I have carried out in the hospital under my charge, and it consists of having all the cleansing done on the morning of the operation, a sterilized pad applied, which the nurse removes when the surgeon takes up his knife. And the surgeon must be ready to operate the moment the patient is under the anæsthetic, for we believe that every moment saved to the patient is of direct influence upon the after

effects of the operation. Antisepsis is the greatest boon yet given to the surgeon, and it behooves us to use it and not abuse it, and the best capital the surgeon or physician can have is an educated common sense.

FRANK BLAISDELL, M. D.

Ingrown Toe Nails.

Dr. Andrews, in the N. Y. Medical Journal, recommends the following modification of Anger's method:

The toes and foot are first scrubbed with soap and water, followed by a solution of bichloride of mercury (1 to 1,000). For anæsthesia, ten to fifteen minims of a two per cent. solution of cocaine hydrochloride is sufficient if distributed in the following manner: Introduce the hypodermic needle from before backward, just under the part of the nail to be removed; as soon as the skin is pierced inject a drop or two and wait a moment before pushing it further; repeat the process until the root of the nail is reached. Withdraw the needle now, and beginning near the primary puncture, distribute a few drops in the skin and soft parts along the outer side of the nail, nearly as far backward as the first joint.

Next wind a small rubber tube around the base of the toe. Before making an incision swab the whole granular area thoroughly with pure carbolic acid.

The first incision begins anteriorly somewhat beyond the edge of the nail, and is carried directly backward (separating a sufficient amount of the side of the latter) to a point about a fourth of an inch behind the true matrix. This is deepened through the soft parts, well down by the side of the phalanx.

The second incision begins anteriorly at the same point as the first, and curves outward and backward to join the posterior end of the primary incision. This is deepened through the soft parts around the outside of the nail until we reach the lowest part of the first incision.

Remove the wedge thus set free and search the posterior part of the wound carefully, so that no part of the corner of the nail or matrix shall be left.

If properly fashioned, the flap which we have made will fit the opposite raw surface perfectly, and should be secured by one or two catgut sutures in front of the nail and the same number behind. Before removing the rubber band apply a moderately thick pad of gauze over the flap, and bind it tightly to the toe with a few turns of gauze bandage. Now remove the rubber tube and complete the dressing.

The patients walk home, and although there is often some pain the first night it does not last longer and they keep about with little discomfort. The dressing should not be changed in less than a week, unless there is some indication, and at the end of ten days or two weeks the cure will usually be complete.

Treatment of Ozena.

Compaired has reported seven cases of ozena treated by hypodermic injections of antidiphtheritic serum. In two instances roseola developed, in one an abscess at the seat of injection. In some instances there was fever, loss of appetite, nausea and general debility. In one instance treatment had to be suspended on account of the frequency and intensity of the nausea. This case was scrofulous, semi-rachitic and profoundly anemic before treatment. The number of injections employed varied from four to twenty-seven. The quantity at each injection was from four to twenty centimeters. The first symptom noted was disappearance of odor. This was followed by edema of the mucous membrane, augmentation and fluidification of secretion.

During the treatment the author used only nasal irrigations of warm sterile salt water, followed by a nasal spray. The conclusions he announces are as follows: This treatment has given more pronounced and satisfactory results than any other yet proposed for ozena. The results are characterized by the disappearance of the odor after the second or third injection of five or six cubic centimeters, and by diminution of the clots and increase of the nasal fluid. The mucous membrane changes in color, becomes redder, more humid, sometimes slightly hyperemic. The crusts are less heavy, dry and extended, and become softer as the treatment progresses. Doses of ten cubic centimeters are not unattended with risk. The dosage should be increased very gradually.

The Treatment of Diphtheria and the Results in the Strasburg University, Children's Clinic.

The clinic is remarkable for its conservatism, neither intubation or the serum treatment is employed. The treatment is local and general.

The diphtheritic exudate is removed without laceration of the tissue, and the germs are then destroyed at the site of operation.

The membrane is removed by means of an application of a 10 per cent. papayotin solution. When the parts are clear, the air

of the sick room is saturated with a spray of 7½ per cent. chloride sodium in glycerine and water. Ice is applied locally and pieces of ice are given the patient.

The general management consists in over-feeding, in keeping the patient warm, and in giving as little internal medication as possible.

Intubation is not practised because intubated children cannot be fed well. A strong point is in the over-feeding. Milk, eggs, meat, bread and alcohol are given in large amounts. If there is resistance to the feeding, the nourishment is forced in by the use of a tube.

The results of the treatment are as follows: Among 658 cases observed between 1889 and 1893, the mortality varied between 19.7 per cent. and 26.6 per cent. Trachæotomy was performed upon 397, of these the mortality in different years ranged between 25 per cent. and 50.4 per cent. In 261 non-operative cases the death rate was from 6.9 per cent. to 16 per cent. The average death rate in the trachæotomy cases was 44.3 per cent. The average death rate in the non-operative cases, 14-6 per cent.

No case of un-complicated nasal diphtheria died from secondary general intoxication.

Cystitis in the Female with Special Reference to Treatment.

Dr. John C. Hersler, in the University Medical Magazine, says the chief indications for treatment of cystitis in the female are:

1. To remove any discoverable source or sources of irritation which act through the medium of the urine. This may be affected by a milk diet, and a discontinuance of the use of acids, pepper, atc. Any mechanical source of vesical irritation should receive appropriate treatment.

2. The urine should be rendered bland by the use of a milk diet; the ingestion of considerable quantities of water, the administration of potassium citrate, if the urine be too acid, or of boric acid if it be alkaline.

3. Pelvic congestion should be relieved by hot vaginal douches, placing the patient in the knee-chest position; and the correction of constipation.

4. The inflamed cystic mucous membrane may be relieved by the administration of boric acid, salol, ol. santal, copaiba, or creosote by mouth; or the use of injections of boric acid, carbolic acid, of nitrate of silver in suitable strengths.

5. The patient's general health should be improved by tonics, etc.

6. Rest in bed, especially in all acute cases, is absolutely imperative.

Etiology of Nasal Obstruction.

Dr. Mayo Collier, in the Journal of Laryngology, draws the following conclusions:

1. That mouth-breathing, under ordinary conditions, must be regarded as pathological.

2. That the constitutional causes giving rise to it, are heredity, together with the sequelæ of eruptive fevers, tuberculosis, specific disease, and such maladies as tend to an adynamic condition.

3. That the local causes are the various obstructive lesions of the nasal passages, referred to in a preceding paragraph, except those exceptional cases due to congenital shortness of the upper lip or other oral malformation, including hare-lip.

4. That notwithstanding the frequent manifestations of mouth-breathing, and reference thereto by specialists, its manifold and far-reaching evil consequences are not fully appreciated by our profession as a whole.

5. That the tendency to spontaneous cure is not to be relied upon, hence, medical or surgical treatment is necessary.

6. That with a view of preventing this and other diseases of the upper air passages, the patients should, in addition to proper care ot the skin and feet, make it a part of his daily toilet to use a suitable cleansing spray applied to the nostrils and throat.

7. That mouth-breathing and the pathological conditions giving rise to it, are brought about by habits and environments incident to civilization.

A Few Hints on the Quickest way to Treat Tonsillitis.

If we could be sure of seeing these cases during the first twenty-four hours, there would be no trouble in stopping them. But as a rule the family doctor is only called in, after all the family and most of the remedies of the neighborhood have been exhausted. We find our patient, sitting up in a chair trying hard to breathe with comfort. Unable to swallow anything but perhaps a little milk or water with or without stimulants. One of the favorites of the public seems to be St. Croix Rum and milk, a great many old ladies looking upon it as "*sure cure.*" Now my own professional experience has been that *no alcoholic stimulants*, do a bit of good in this class of cases, in fact they work *the other way and do harm*, by being a direct irritant to the inflamed mucous membrane.

On examination, which is best made by

reflected light, by the aid of a head mirror, we find the tonsils swollen, excessively tender to the touch, the whole back of the throat swollen, and of a dark red color. Sometimes we have the small white spots (called by our friends of "the small pills" Diphtheria). Pulse, high, weak and inclined to be fast. *Temperature*, with the majority of cases, inclined to be high always being higher in the young; sometimes going as high as 105 deg.

Urine high colored, *very acid* with a stale odor and not very large in quantity. Bowels, as a rule, constipated, in fact we might say markedly so. *Speech*, thick and every word uttered with a great effort. *The joints*, both in the arms and legs, will in a great number of your cases be tender and sore. Now, how shall we country Doctors treat these cases. We have none of the advantages of our brother, "The specialist," in the large cities in the way of apparatus, &c, First give your patient twenty grains of calomel with five grains of powdered Jalap and twenty grains of powdered Bi-Carbonate of Soda well triturated together. In four hours follow this up with a full tumbler-ful of "Franz Josef Water," and every morning whilst the illness lasts, give half a glass of the water, that will wash out the bowels and give your patient one less evil to contend with. Every two hours give your patient five grains of the Salicylate of Soda in a little Glycerine flavored with the syrup of Orange blossoms, gradually decreasing the dose of the Salicylate as your patient's throat symptoms get less and less, as a gargle use plain cold ice water or water fresh from the spring. Externally, around the throat, apply cloths wrung out *in ice cold water, changing them at least once every fifteen minutes during the acute stage*, lessening up in the frequency of the application as the throat symptoms disappear.

By following this line of treatment, I find my cases get better quicker, in fact in half the time that they used to, in the old fashioned way of treating them with Iron and other disgusting gargles. During the acute stage, feed your patients on ice-cold Boullion, or the fresh juice pressed from tender and juicy sirloin steak (with a wooden lemon squeezer), fresh Pine-apple if it can be had, a wine glass full four or five times a day, but do not give milk, eggs, or solid food till all the throat symptoms are gone entirely.

J. D. H.

The Source of Puerperal Sepsis.

Dr. J. M. Duff read a paper with this title at the Twelfth Annual Meeting of the American Association of Obstetricians and Gynecologists, August 20th, 1897.

The author said that the exact source in any given case is not always easy to determine; in fact, in many instances, after the most patient and careful search one is unable to find even a probable source. In cases in which the source of infection is determined, however, it generally proves to be one which might have been avoided.

Aseptic midwifery has done much to prevent the occurrence of puerperal sepsis, and, consequently, to lower the rate of mortality following childbirth. An *accoucheur* who attends a patient without observing the strictest possible aseptic and antiseptic precautions is guilty of nothing less than malpractice. Frequently, however, too great reliance is placed upon the use of antiseptics. A well-known member of the profession said recently that he felt perfectly safe in attending a patient in labor after visiting one suffering from erysipelas or diphtheria if he washed his hands thoroughly in a strong solution of mercuric bichloride prior to entering the lying-in chamber. Such a proceeding the essayist thought most reprehensible.

The speaker then briefly reported the histories of 50 cases of puerperal sepsis which have come under his personal observation, and specified the source of infection, when discovered, in each. In 14 of these cases, the source of infection could not be traced, although 2 were instances of placenta previa. Five of the patients were attended by a midwife, and no aseptic precautions were observed. The source of infection in the remaining 31 cases was as follows: Retained placental tissue, 5; placenta spuria, or succenturiata, 1; attending physician had previously visited a patient ill with erysipelas, 1; putrid fetus, 4; physician had previously dressed an abscess in another patient, 1; laceration of cervix and perineum, 3; putrid blood clots, 2; diphtheria case in same house, 1; acute gonorrhea in husband, 1; protracted labor, due to shoulder presentation, with sloughing of vaginal walls and cervix, 1; retained membranes, 1; tonsillitis in attending physician, 1; physician had previously dressed a case of gangrene of leg, 2; physician had opened suppurating finger, 1; mother of patient had pelvic abscess at time of latter's confinement, both being attended by same nurse, 1; decaying animal matter in cellar of house in which confinement occurred, 1; child of patient's sister had dysentery, 1; physician, a few hours previous to patient's confinement, had curetted a patient for incomplete abortion, 1.

Bicycling for Women.

Theilhaber believes that bicycling for women, when not participated in to excess, is an excellent body-gymnastic. He advises that women should not, as a rule, ride faster than nine to eleven miles per hour, and the maximum day's journey should not be more than thirty-one to thirty-seven miles. The exercise does not cause hyperemia of the internal genitals. A comparison between bicycling and running a sewing-machine is false, the forms of movement completely differ. That a tendency to masturbation originates from friction of the external genitals when the rider sits in the upright position is not true, except, perhaps, where the labia are widely separated. This is avoided by employing the Christy or a similarly constructed saddle. A relative increase of the sexual desire usually occurs, but this is explained by the accelerated metabolism and excited action of the regulative functions. Abrasion of the genitals or even pruritus are frequently observed, particularly in fat women, and those who perspire profusely. In time, however, this tendency disappears, as the tissues become more resisting. To avoid this the writer recommends the Thomann, Buttner, or Christy saddle, and he has in many cases employed zinc ointment as a prophylactic. That only one group of muscles is strengthened is not true or is labor hindered through hypertrophy of the muscles at the pelvic inlet. He advises that the dress should be hung from the shoulders and made of woollen material, also that no corset or girdle should be worn. Diseases, like chronic bronchial catarrh, pleural thickening, certain forms of phthisis, and some cases of heart disease, he believes, are benefitted if tke greatest care is observed. Bicycling is particularly to be recommended for nervous diseases—neurasthenia, hysteria, and neuralgia of certain nerves. Anatomical diseases of the nervous system are improved. It is useful in general muscular weakness and chlorosis, when not participated in to excess; in gouty and lythic acid diathesis, diseases of the stomach of nervous origin, atony of the intestines, the latter, however, often follows. He recommends it for the amenorrhea of chlorosis, and where there is an undeveloped uterus. In nervous dysmenorrhea it should be permitted where there is cervical catarrh, flexions and versions of the uterus. Hemorrhagic endometritis, gonorrhea, tumors, diseases of the bladder, pregnancy, and during the menstrual flow are contraindications. In two instances the writer has observed fibroid tumors rapidly increase in growth from this cause, and two or three pregnant women under observation aborted. He believes, considering the large numbes of women now enjoying this sport, deleterious influences are very rare.

Is There a Fatty Degeneration?

Rosenfeld has tried to solve in an interesting manner the question whether there is such a thing as fatty degeneration, and has arrived at the conclusion that there is no such process. (London Lancet.) The differentiation of fatty processes into two—infiltration and degeneration—was based on the hypothesis of the origin of fat from albumin, which hypothesis, the author tells us, has been disproved by Pflüger. He has investigated many of the conditions in which fat is apparently formed from albumin, as the fatty liver of phloridzin—and phosphorus-poisoning, and the formation of milk. In fasting animals receiving phoridzin, fat to the amount of 75 per cent. is stored in the liver. But this fat cannot be derived from the albumins of the hepatic cells, for the quantity of albumin in the liver is not materially diminished.

The fat has been carried from the "fat-depots" to the liver, as may be observed in dogs that having through long starvation become devoid of fat, are then fed with a foreign fat,—*e. g.*, sheep tallow. When such sheep-tallow dogs are given phloridzin, the sheep-fat is carried from the subcutaneous tissue to the liver, in which nearly 50 per cent. of such fat may then be found. In phosphorus-poisoning the fat is also only infiltrated, for in totally fat-free animals phosphorus-poisoning is not able to produce fatty liver, because the fat-depots are empty. If the fat originated from albumin, it is difficult to understand why it is not formed from the abundant albumins present. If the sheep-tallow dog is poisoned with phosphorus, the fat is carried from the depots to the liver, which may store as much as 40 per cent. of sheep-tallow. That the fat in the milk is not derived from albumins was shown by the following experiment:

A sheep-tallow slut was allowed to become pregnant, and then received only the leanest meat. The fat in the milk was sheep-fat, hence it cannot have been formed in the body of the animal, for then it would have been dog-fat, but must have been conveyed to the mammary glands from the fat-depots.

The theory of a fatty degeneration, the author insists, must be entirely relinquished; in its stead is to be placed that of an albuminous degeneration of the cell; this injury

to the cell is followed by the infiltration of fat as a reparative attempt.

The fat of the organism consists of the fat of the food and that formed from the carbohydrates.

Tuberculosis of the Bronchial Lymphatic Glands.

Fronze in the Edinburgh Medical Journal directs attention to the much greater importance of disease—that is, tuberculosis, of the lymphatic glands—in the young, compared to similar affections in adult life. Tuberculosis of the glands may give rise to a variety of symptoms chiefly dependent upon pressure, as for instance, of the bronchi (stenosis, atelectasis, bronchitis), of the blood-vessels (distention of the veins, edema, thrombosis, arterial murmurs, hemorrhagic exudates), of nerves (vomiting, cough, asthma, hyperesthesia of the bronchial mucous membrane, rapid pulse, cardiac dilatation, if the vagus be involved, paralysis or spasm of the vocal cords, if the recurrence be involved, inequalities of the pupils, if the sympathetic be involved, dyspnea, if the phrenic be involved), and of the esophagus (dysphagia). The consequences of these various involvements are diseases of the lungs, pleuræ, mediastinum, heart, pericardium, and the general system. Important subjective symptoms are palpitation of the heart and asthmatic attacks. There may suddenly develop imminent danger to life if a caseous gland rupture into the bronchus, giving rise to symptoms of a foreign body. He reports three cases. The first, a child, aged 8 years, suddenly developed dyspnea and cyanosis, lasting twenty hours. It then remained comparatively well for two weeks, when it again suddenly developed similar symptoms, and was brought to the hospital in an apparently dying condition. Immediately tracheotomized. In the subsequent expectoration, which was partly caseous, tubercle bacilli were found. Later a tubercular infiltration of the right lower lobe ensued, but, on the desire of the parents, the child was discharged from the hospital. The second case, aged 2½ years, developed also suddenly dyspnea and cyanosis. The diagnosis was rightly made of tuberculosis of the bronchial lymph-glands, the child tracheotomized, and some caseous material removed. Impossible to remove all, later some more was dislodged, causing blocking of the right bronchus and death by suffocation. The third was a very interesting case of a rachitic child, aged 14 months, who had profuse hemorrhages from the nose and mouth, some infiltration of the lungs, otorrhea, and enlargement of the cervical and inguinal lymphatic glands. The necropsy revealed an aneurism of a branch of the pulmonary artery which had ruptured into an excavated caseous gland, and as this had previously perforated a bronchus, the hemorrhage was explained. This condition must be borne in mind when dealing with hemoptysis of childhood, which fortunately is a rare condition. These later serious consequences can be avoided by early diagnosis and proper treatment. The experience of the author is that not only are syphilitic but also tubercular glandular enlargements of children greatly benefited by mercurial inunctions.

The Value of an Exclusively Meat Diet in Certain Cases of Chronic Gout.

Dr. Armstrong relates in the British Medical Journal that during the last few years he had given trial in various cases of gouty arthritis and recurrent renal calculi to a method of treatment based on the prolonged administration of only red meat and hot water. Very marked improvement had resulted, which had persisted in spite of gradual return to an ordinary dietary. His own observations on auto-intoxication in relation to the causation of gout and rheumatoid arthritis had led him to believe that it is the complex chemic changes brought about by the admixture of red meats with carbohydrates and sugar that causes the excessive formation of uric acid. His plan is to give the patient a daily allowance of from one to four pounds of lean beefsteak, minced and cooked in various ways, the patient drinking from one to five pints of hot water, and avoiding all starchy, saccharine, and fermentative articles of food. The effects observed are rapid diminution in abdominal girth, loss of fat and flabby tissue. increase in the quantity, and ultimate disappearance of urates, alkaloids and toxins from the urine. The joint-swelling greatly diminished, the aching and pain became much lessened, and the mobility of the joints was considerably increased. The capacity for work, mental and bodily, was enhanced and the symptoms of maldigestion and disassimilation disappeared. This treatment is indicated in obstinate chronic gouty arthritis, in recurrent uric acid calculi, in frequent and intractable migraine, and in cases of persistent gouty dyspepsia. It has proved especially useful in the presence of symptoms of amylaceous and intestinal dyspepsia and of excessive formation of hydrogen sulphide, urates, indican, skatol, creo-

sol, and other toxins. The carbohydrates, by their affinity for oxygen, interfere with the due oxidation of the tissues. Under the plan of treatment proposed, digestion is more complete and the processes of fermentation and putrefaction are kept within narrower limits, oxidation being more perfect and less waste being consequently left in the system. Whatever poisonous matters remain in the system are readily eliminated by the taking of the hot water, which also flushes the stomach, liver, and kidneys. The treatment is irksome and trying, and must of necessity be carried out with great strictness; therefore its use should be confined to the more difficult cases. It should be prescribed but rarely, and then only under the most careful supervision in cases in which the heart or kidneys are diseased. Used with due care it is a most efficient and brilliant addition to the therapeutic measures. In the discussion Haig admitted that certain cases of gout are benefited by a meat diet, as a result of its stimulating qualities. When it fails to act as a stimulant it is likely to prove dangerous.

Fruit in Summer.

The bland varieties of fruit are the most wholesome and nutritious—strawberries, apples, pears, grapes and gooseberries. The last named, however, with currants and raspberries, are less wholesome than the others. Stone-fruits are apt to disagree with the stomach; but the more watery, as peaches and large plums, are better than the smaller and drier, as apricots and damsons. The pulp of oranges renders them heavy. Among foreign fruits, bananas are wholesome. Dried fruits and the skin of fruits in general are indigestible. Cooking removes much of the acidity from crude fruit, and renders it lighter as well as more palatable. So treated, it is productive of good and no harm; but it is a fundamental principle that whatever fruit is eaten uncooked must be fully ripe and not over-ripe. This may sound trite, and, indeed, the principle is commonly admitted, but not, it would seem, by all, for we still find people, and not a few, who will themselves deliberately take, and worse, will give to their children, green gooseberries, green apples, &c., the very hardness of which, apart from their acid pungency, suggests their unfitness for digestion. Such people use as food an acid irritant poison, whose necessary action is to cause excessive intestinal secretion with more or less inflammation. Hence arises diarrhœa. On the other hand, fruit which is over-ripe, in which fermentation has begun, is a frequent cause of this disorder, and equally to be avoided. It should never be forgotten by any who incline to follow the season in their feeding that the want of such precautions as the above may produce dysenteric form of diarrhœa.

Action of the Bacterium Coli Commune on the Endometrium.

T. Morisani has investigated the action of the bacterium coli commune on the lining membrane of the uterus. He first experimented with cultures of the microbe on the uninjured uterine mucous membrane, and after from four to twenty days got negative results. Then he experimented on an irritated endometrium. The irritation was either mechanical (a probe), thermal (hot water), or chemical (nitrate of silver); and the result in every case was death after from fourteen to fifty-two hours from endometritis and septic peritonitis. It is, therefore, evident that the cultures of this bacterium do no damage to an unbroken endometrium; whether this result is due to the uterine secretion which prevents the growth of the micro-organisms, or to phagocytic action is left uncertain. When, however, the mucosa is irritated, a local and general form of infection is set up. Morisani believes the changes to be due to the bacterium and not to the irritation, for in a test case he applied nitrate of silver to the endometrium without the presence of the bacterial culture, and the result was temporary destruction of the tissues without any trace of endometritis or suppuration. In another group of cases the cultures were introduced into the rectum, and in some of these the uterine mucosa was irritated, in others it was not. All the animals died, but only in those with a damaged mucosa were there signs of endometritis.

Acute Nephritis.

Ebstein in the London Lancet discusses acute nephritis occurring as a complication of chronic gastro-enteritis, and relates a case in a woman, aged 27. Here there was no other cause for the disease either in past illnesses or in family predisposition. She had suffered from diarrhœa for nine months, and from pain in the gastric region and loss of appetite for six months. She suffered from tape-worm, but as to whether this was the cause of some of these symptoms there was some doubt. The nephritis arose most acutely, and proved fatal in a few days from eclampsia, coma and collapse. During the illness small hæmorrhages oc-

curred in the subcutaneous tissue. At the necropsy a tape-worm was found in the intestine. There was a follicular enteritis with ulcers and enlargement of the mesenteric glands. The spleen was quite normal. The kidneys presented the appearance of an acute nephritis. The other organs were healthy. It was only on the third day after admission that a small quantity of albumen appeared in the urine. Later abundant casts were found. The asthmatic attacks present were uræmic in character. As regards any other possible cause for the nephritis, except the gastro-enteritis, it must be mentioned that there was no ground whatever for thinking that the patient had influenza. There were no symptoms of an acute infective illness; there was no fever and no splenic enlargement. The author is of the opinion that the suddenly oncoming nephritis was due to an intoxication from the alimentary canal. The severity of the nephritis arising in cholera is well known. In acute intestinal catarrh renal symptoms may appear, but in cases of chronic catarrh the condition of the urine has not been carefully observed. In this case the stools were very light, but contained no fat. The author records this case to draw astention to the possible occurrence of acute nephritis as a complication of chronic gastro-intestinal catarrh.

Diagnosis of Early Pregnancy.

Dr. Wm. S. Gardner (American Journal of Obstetrics) after mentioning several reasons why an early positive diagnosis of pregnancy is important, says that recent surgical advances have added to these the great necessity of being able to recognize a pregnancy and distinguish it from other pelvic conditions at a period long before the fœtal heart sounds can be heard. Not only is the reputation of the patient at stake, but the life of the child and the life of the patient, to say nothing of the chagrin of the operator who cuts down upon a normal pregnancy. It would be rather overstating the case to say that a two months' pregnancy can be absolutely diagnosed in every instance, but it is well within bounds to say that a two months' pregnancy is the easiest to diagnose of all pelvic growths which present a tumor of equal size, and, further, that it is only where unusually exceptional difficulties are present that it is not possible to make a positive diagnosis. The author then considers the various well known signs and symptoms of pregnancy, but lays great stress on the following: By an ordinary physical examination it has been possible to arrive at conclusions that, at least to myself, have been eminently satisfactory. Just as in making a bimanual examination in other conditions, it is sometimes necessary to use an anæsthetic to relax the abdominal walls, but ordinarily the anæsthetic can be dispensed with. When the uterus is in the normal position, by placing two fingers of one hand in the vagina, bringing the tips of the fingers against the anterior vaginal wall—or, when retroverted, behind the cervix—and the other hand over the abdominal wall, the size, shape and consistence of the uterus can be easily determined. At eight weeks the uterus is about the size of a large orange, is regular in shape and distinctly *cystic*.

Surgery and Facts.

Dr. F. W. Ross presented a paper with the above title at the American Association of Obstetricians and Gynecologists August 20, 1897. He said the work of the Association was confined between the diaphragm, the perineum and the abdominal walls, and that the members had met to cultivate and promote a knowledge of whatever relates to abdominal surgery, obstetrics and gynecology. Attention was drawn to some unsettled questions, the first being peritonitis. Are we able to do more to save the lives of patients suffering from this disease in its acute form than we were ten years ago? Are we not but little better off with all our antiseptic and aseptic washes, gauze and tube drains and purgatives? He was satisfied that surgery could carry us no further when battling with this disease. The question of operating upon the appendix and the diagnosis and treatment of ectopic gestation had been fairly well settled. The method of dealing with the pedicle in ovariotomy had been settled, except for the fact that some operators preferred silk, while others were assured of the safety of catgut. Operations upon the gall-bladder and gall-ducts had been performed many times during the past ten years and they were now well recognized as proper surgical procedures. The operations of nephrectomy and nephrotomy were looked udon as every-day procedures justified by the consensus of surgical opinion. Abdominal hysterectomy was an operation that had been much improved and simplified, some operators still being wedded to the clamp, while others preferred some of the other methods. The advisability of oöphorectomy for some fibroids could not be doubted. There were two operations performed that Dr. Ross thought are of doubtful value, viz.: the fastening of the kidney to the side

and the fastening of a uterus anywhere. He considers that these operations have been recklessly performed and unnecessarily done. Another class of operations to which more thought must be given were those for intra-abdominal and intra-pelvic cancer. When peritoneal cancer has been diagnosticated, surely exploratory operation is uncalled for. Operations for other forms of cancer are of questionable utility. Take, for instance, resection of a cancerous intestine, gastro-enterostomy for pyloric cancer and removal of the uterus for uterine cancer. Gastro-enterostomy and resection of the intestines are poor makeshifts. For carcinoma uteri vaginal hysterectomy is the only operation that should be contemplated, but at best it prolongs life for but a short time.

Toxemia of Pregnancy.

Dr. A. H. Wright (Association of Obstetricians and Gynecologists, Aug. 20, 1897,) said that the chief symptoms of this condition were salivation; disorders of digestion, with sometimes a peculiar taste, and constipation; general malaise; anemia; nervous disturbances or headache; disorders of vision; irritability; deficient excretion of urine or some of its constituents, and albuminuria. To speak briefly, he thought any sign of the slightest departure from ordinary health during pregnancy should make us suspect the advent of general toxemia, and should receive careful investigation and thorough treatment. If, for instance, there be general malaise, with slight headache, but no albumin in the urine, let us not be deceived, since albuminuria was only one of the symptoms of systemic poisoning, and sometimes the last to appear. Its absence proved absolutely nothing.

Coming to the treatment, reference was made to milk diet for toxemia or albuminuria of pregnancy. He believes that a purely milk diet is good for young babes and calves, but he does not think that it is suitable for adult human beings. Yeo, in his admirable book on "Food in Health and Disease," shows clearly that milk is not a suitable food for healthy adults because it contains an excess of albuminates and fats, and that it should be mixed with other foods, especially the carbohydrates. If it be conceded that milk alone is not the best food for healthy adults, it is difficult to conceive how it can be the most suitable in any case of disease.

In connection with his results in the Burnside Hospital, in nine years they have had sixty-five cases of toxemia with albuminuria with two deaths—both from eclampsia. One of these two patients came into the hospital in a dying condition with eclampsia, having received no previous treatment. In the sixty-five cases mentioned there were many cases where the albuminuria and other symptoms were only slight.

In conclusion, the author enumerated the main points in his treatment as follows: 1, a carefully selected mixed diet with plenty of water, plain and mineral, lemonade without sugar, etc.; 2, rest, good hygienic surroundings and proper clothing; 3, the regular and persistent use of purgatives for weeks or months, with a preference for epsom salts; 4, a warm daily bath; 5, the induction of abortion or premature labor in rare cases.

The Cause of Sudden Death after Antitoxin Injections.

In the Canadian Journal of Medicine and Surgery, Drs. A. Seibert and F. Schwyzer publish the following conclusions: 1. Antitoxin serum does not seem to be capable of causing threatening symptoms and speedy death, even when brought quickly into the blood current in very large doses. 2. The carbolic acid used in preserving the antidiphtheritic serum must be in such a weak solution as to be entirely unable to cause the characteristic carbolic convulsions produced in every one of our second series of experiments. The absence of these convulsions in patients in cases of sudden death, the entirely different group of symptoms reported in them and the fact that guinea pigs and rabbits will survive even very large and concentrated doses of carbolic acid injected into a vein, lead us to discard the possibility of this drug having caused the reported deaths. 3. Even very small quantities of air will cause severe disturbances and ultimate cessation of breathing in every animal experimented upon. These disturbances are entirely analagous to the symptoms reported as preceding the sudden deaths after antitoxin injections. Air is found alongside of the fluid in every syringe used for hypodermatic injections, and being pressed under the skin with the fluid may readily come in contact with a punctured cutaneous vein, and so may enter the blood vessel and the right heart, even before the serum has been absorbed. In view of these facts, and of our experiments, we here express our firm opinion that the sudden deaths reported after antitoxin injections were caused by injected air and not by the antidiphtheritic serum.

The Great Lessons Taught by Bacteriology.

Dr. Woodhead, in the London Lancet, seeks to correct certain false notions that have arisen regarding the life work of the bacteria. The tendency has been to accept them as the ultimate causes of certain forms of deadly disease and as promoting the evolution of putrefactive products; whereas, as a matter of fact, they are instrumental in keeping the world sweet and clean for its inhabitants and in maintaining a constant circulation of organic matter from the dead condition to the living and from the living to the dead. It is interesting to reflect that without the aid of bacteria the human race would be unable to continue its existence, the animal and vegetable world would long since have perished from sheer inanition and starvation, and the work of the world as a laboratory would have come to a standstill. Bacteria, as is being found out every day, may be engineered for man's good, so long as they are kept under intelligent control, and once their habits are understood they prove to be the most perfect servants that can be obtained. The lecturer proceeded to trace the history of bacteria and their discovery, and the developments up to the present time which have followed upon a close and exact study of their behavior. The functions of bacteria in the great natural processes in the bearing upon sanitation were then dwelt upon; and finally, the recent developments in regard to the wonderful ability of certain species of bacteria to appropriate the nitrogen in the air, through the medium of the soil, for the maintenance and sustenance of leguminous plants, formed not the least interesting section of the lecture. It was remarked that so well defined were the results of the researches in this direction, that cultivations of these organisms are now made for sale and kept in closed bottles for distribution to all parts of the world. There, when mixed with water and thrown over the soil, they immediately begin to do their work, and taking nitrogen from the air, which lends valuable assistance to that from the soil, they enable the plants, and especially those requiring large quantities of nitrogen for their full growth and development, to grow both more rapidly and more luxuriantly than they could do if unaided by this supplementary store. The relation of bacteria to disease was next touched upon, and the beneficial effects of fresh air and light accounted for by observations on the inhibitory action of these agencies upon such organisms. Dr. Woodhead concluded with the following words:

"As yet no one can say that we have reached even a resting stage, and it behooves all those who desire to see advances made in the treatment and prevention of disease—whether in the department of protection and cure, with which medicine is specially concerned, or in the preventive department, with which civil engineers have to deal—to continue to follow closely every new fact and every fresh theory arising out of new observations, in order that bacteria and the forces with which they are endowed may be made our well-disciplined servants, instead of being allowed to waste their energies as our uncontrolled and uncontrollable masters."

The Treatment of Pott's Disease of the Spine.

Chipault holds that the essential treatment of Pott's disease is based on immobilization of the patient. In young subjects suffering from the disease in an early stage, but still progressive, this immobilisation should be assisted by the direct application of a metallic ligature to the spinous processes of the affected region. In cases of early and still mobile angular curvature the treatment by immobilisation should be preceded by reduction of the displacement during anæsthesia. This reduction, it is stated, may be readily effected after one or more attempts, according to its extent. If the curvature be of long standing, and ankylosed, support by a corset is alone indicated. When Pott's disease is accompanied by complications, such as paraplegia and chronic abscess, immobilisation is still indicated, and also in many cases reduction of the curvature. Paraplegia very rarely requires any special treatment. On the other hand a purulent collection, whenever it shows a tendency to open either externally or into some internal organ, and when it has become fistulous, necessitates prompt and energetic surgical treatment, consisting in a free exposure of the interior of the sac, and a "toilette" as complete as possible of its walls and of the diseased vertebræ. The author insists on the importance of medical treatment in cases of Pott's disease, and of attention to hygiene, suitable medication, and of exposure to fresh and pure air either at the seaside or in certain mineral establishments. Sodium and sulphur chlorides, it is asserted, are absolutely indispensable for assisting the organism to gain the full benefit of local treatment. The surgeon who neglects this portion of the treatment will, notwithstanding the most rational orthopædic and operative measures, run the risk of almost constant failure.

Importance of Abdominal Palpation Compared to Vaginal Examination.

Ahlfeld (American Journal, does not agree with the recommendations of Leopold to employ abdominal palpation exclusively as a means of diagnosis during the process of labor. Abdominal palpation alone is not sufficient to recognize existing or impending dangers; intrapartum its execution is difficult, and if thoroughly performed, not free from danger. The obstetrician who manages a labor case without performing vaginal examination is largely trusting to chance. With proper asepsis vaginal examinations are free from danger. Both Ahlfeld and Leopold occupy extreme positions. Abdominal palpation and vaginal examinations are of great and unquestionable value, and used conjointly they enable us to make a correct diagnosis. Leopold in his first essays drew attention to the absolute neglect of abdominal palpation and pointed out its value as a means of diagnosis; he also showed that puerperal infection often follows vaginal examinations and that a decrease in the number of examinations decreases the dangers of infection. Whenever the physician is not positive that everything proceeds normally a thorough vaginal examination is certainly indicated. It would be bad obstetrics to wait until actual complications have appeared, but the frequent and aimless vaginal examinations cannot be too severely condemned. Concerning the danger of abdominal palpation, we cannot recall a single case where an accident has followed its employment, nor can we imagine that such could occur except its execution had been more brutal.

The Treatment of Hereditary Syphilis in Children.

The following methods are recommended: For a child six weeks old: twenty drops of Van Swieten's liquid (corrosive chloride of mercury, 2 grains; alcohol, 3 drams; and distilled water sufficient to make four ounces) four times a day, and at the same time inunction with one-half to two grammes of mercurial ointment. The inunction must be made in those parts which do not absorb too readily, and which are not thickly covered with hair. Make the inunction at night and cover the parts with cotton. The child should also be bathed twice a week in starch water. Continue this treatment without interruption for five or six months, increasing or decreasing the doses only as needed. One-quarter, one-third, or one-half a teaspoonful of Gibert's syrup (hydrarg. biniodid., gr. iii; potas. iodid., gr. cii; water ʒiii; and syrup, q. s. ad. ʒx) should be administered four or five times a day in a bottle of water. The following prescriptions are given for sublimate baths, which should, however, be avoided when ulcerative affections are present.

℞ Hydrarg. bichlor. corros..... 3.0
Alcohol..... 30.0
Ft. Sol. Sig.—To be added to a bath:

or,

℞ Hydrarg. bichlor. corr..... 4.0
Ammon. mur..... 6.0
Aquæ..... 2500.0
Mix. Ft. Solutio.
Sig.—For a bath of ten minutes duration (every second day).

When the slightest intestinal irritation is observed, the baths are to be omitted; and if diarrhea continues, the mercury by the mouth must also cease. The inunction should, however, be continued.

Administration of mercury to the mother or wet nurse; if these latter are suffering with syphilis, iodide of potassium should be given by the mouth and mercury by inunction. Mucous patches should be touched with the nitrate of silver stick. Ulcerations with phagadenic water (corrosive subl., 0.25; Aqu. 100.0). Enlargement of the bones should be treated with mecurial plaster.

The Diagnosis and Management of Syphilitic Brain Disease.

Dr. E. C. Spitzka at a recent meeting of the N. Y. Academy of Medicine considered the diagnosis between genuine melancholia and a somewhat similar condition observed in the initial period of syphilitic dementia. In true melancholia there is a mental depression uninfluenced by surroundings; in the syphilitic disease the patient is depressed, because he is unable to attend to his business, and suspects that his friends realize this. In the former insomnia is present, while in the initial period of dementia syphilitica the patient sleeps through the night, and often also during the day. The true melancholia is universally neglectful of his dress; the other is very particular about certain parts of his dress and negligent about other portions. In true melancholia the patient is seclusive, while the syphilitic is irritable, and his symptoms show great variations from day to day, finally drifting into a condition in which slight but characteristic changes in the medulla oblongata are found. Dr. Spitzka thought the differential diagnosis of great importance, because proper treatment in the early stages of dementia syphilitica might bring about

complete recovery. In his experience, the common error had been that of too conclusive reliance on the iodides. His own initial treatment was always with mercury, preferably by inunction. The cases of syphilitic dementia, he says, are usually over forty-five years of age, and suffer from renal insufficiency. The syphilitics often contemplate suicide, but only actually commit it on the impulse, and without premeditation. Although gastric irritation is quickly produced in ordinary persons by large doses of iodide, in the cases under discussion very large quantities of the iodide are not only tolerated, but often seem to act like a charm.

Placenta Previa with Special Reference to Treatment.

This was the title of a paper presented to the Obstetric and Gynecological Association, Aug. 20, 1897, by Dr. W. H. Wenning of Cincinnati (Med. News). Dr. Wenning said that he could offer nothing new in the way of suggestions for the treatment of placenta previa, but would refer particularly to the different methods of meeting the two principal indications, namely, to arrest hemorrhage, and to expedite labor. In the first named, each procedure has its peculiar advantages and disadvantages, and no special method is applicable for each and every case. He briefly summarized the histories of fifty cases which have been reported by different American practition rs during the past five years, and said it is surprising to note that about three times as many successes have resulted from the much condemned method of *accouchement force* in these cases as compared with other procedures.

The use of the tampon, rupture of the membranes, and version, were successively reviewed, and the speaker asserted that in a majority of instances reliance cannot be placed upon one of these alone, as it frequently requires a combination of all three at the proper time to bring the case to a safe conclusion. He laid down the proposition that the tampon is applicable only before dilatation of the os, rupture of the membranes after the onset of labor pains, and version after the os is dilated or dilatable. Each of these procedures is subject to certain modifications, and frequently it is difficult to determine when to abandon one and resort to the other. He insisted that if a tampon is inserted into the vagina a patient must never be left for a moment until delivery is complete.

Rupture of the membranes, as a rule, should be resorted to only when the os is sufficiently dilated to allow the head to press upon the cervix, or the hand to be introduced for the purpose of version. Internal version is the oldest and best-known method of delivery in placenta previa, and is most effective when the os is dilated or dilatable. *Accouchement force* is a dangerous procedure as it is very apt to cause laceration and even gangrene of the cervix, and is never justifiable unless no other means can be resorted to in order to terminate labor and save life.

The Treatment of Malarial Fever.

The Medical Times and Hospital Gazette states that Celli and Santori have recently carried out some valuable and interesting experiments with a view of ascertaining the period of incubation of malarial fever after treatment with the blood serum of immune animals. They, knowing that the blood serum of animals naturally immune has no influence upon the course of malaria, hit upon the plan of using the serum of animals that had been repeatedly exposed to malarial infection, hoping that it might possess more protective value. In carrying out their investigation they used the blood serum obtained from buffaloes, cattle, and horses, that had been kept in the Paludi Ponti and Maccarese, which are the most malarial districts in the neighbourhood of Rome. Employing two methods to decide their point, they treated one set of persons with serum and subsequently inoculated them with malarial blood, and a second set, who were obliged to reside in malarial localities at that period of the year when malaria is most common, were also treated with the serum. In the first set six persons were treated, being subcutaneously injected with ten cubic centimetres of serum at periods decreasing from ten to four days. The results were good; the patients occasionally manifested a slight reaction, but no case developed any albuminuria, although each patient received some 130 grammes of serum. Three of these persons were then inoculated with blood from a quartan patient, and all three passed the longest incubation period that has hitherto been known without symptoms. The other three received the blood of a severe case of estivo-autumnal fever, a control (non-protected) individual receiving a similar dose. In the first group fever did not appear until twenty-five days after inoculation. The first attack was very light, only becoming more typical at the second paroxysm. In the second group, the control individual developed fever in

forty-three hours; in the man treated with buffalo serum in thirty hours; in the one treated with horse serum in six days; and in the one treated with cattle serum after seventeen days. Celli and Santori, therefore, conclude that preventive treatment with the serum of naturally immune animals which have been exposed to malarial infection, prolongs the incubation period of experimental malarial fever in human beings. In the second group of experiments, a family that was employed in the Agro Romano was treated as the other patients had been, and but one of five showed any malarial symptoms, and they were quite slight. All the members of another family living in the neighbourhood were attacked with severe forms of malaria. Such experiments as these, in which the human animal plays the chief part and the "lower" animal quite a secondary *role*, should gladden the hearts of the anti-vivisection society, and if that society be heart and soul in their crusade they should offer themselves for similar experiments. It would be a grand thing, for instance, if the rank and file of the society would undertake to be inoculated with serum protective against, let us say, yellow fever, while the officer played the part of "control individuals."

Post-Partum Douches.

The following Editoral appears in the September edition of the Medical Summary.

We have noticed recently in our exchanges a number of articles bearing on the subject of the vaginal douche, some of them advocating the daily washing out of the parts with antiseptic solutions, etc. A careful study of the matter leads us to the conclusion that nature will take care of herself if the *attendant will keep himself clean.* The epidemics of peritonitis of years ago were traced to unclean medical attendants. It has been clearly proven that the fluids excreted from the uterus are antiseptic in themselves, and that they seem to keep the parts clean and aseptic.

A prominent physician in the South writes us saying that he has attended 600 women, and in only one or two instances has he noted any trouble after the birth. "But," says he, "I have made it one of my religious duties to keep myself—my hands particularly—clean. Anyone having practiced among the negro population in the South must have noted the unsavory surroundings. Such a thing as a clean wash-pan, even, is not to be had; but in such cases I have never had any unpleasant sequelæ."

This experience would therefore indicate that unless positive proof of venereal disease exists, the post-vaginal douche is unnecessary and uncalled for. If the attendant is clean he need not fear but that the patient will be all right.

Disinfection of Soiled Linen.

Beyer has tested different methods employed for the disinfection of bed linen and underclothing. The ordinary methods by boiling are not suited to these articles, as the presence of blood, pus, and feces causes an ineradicable stain if a high temperature is used. Soaking the garments in solutions of various soaps for one or two days failed in every instance to kill cholera, typhoid, and pyogenic organisms which were mixed with the feces with which the garments were smeared. In some cases the germs were killed when the solutions containing the linen were kept at 50 deg. C. for a few hours. With lime-water the results were much better. Sample garments which were soaked in this solution for twenty-four hours were found to be sterilized. An equally good result was obtained in a hospital where about one-half a cubic meter of soiled linen was soaked in lime-water for forty-eight hours—or for twenty-four hours if the clothing was first rinsed with lime-water and then placed in a fresh solution. The lime-water does not injure linen or cotton goods, but shrinks woolen to such an extent as to prevent its use.

The American Pediatric Society is making a Collective Investigation of Infantile Scurvy as occuring in North America, and earnestly request the cooperation of physicians, through their sending of reports of cases, whether these have already been published or not. No case will be used in such a way as to interfere with its subsequent publication by the observer. Blanks containing questions to be filled out will be furnished on application to any one of the committee. A final printed report of the investigation will be sent to those furnishing cases.

[Signed].

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"The Action of Phytoline in Obesity."

I. N. Love, M. D., St. Louis, Ex-President Mississippi Valley Medical Association, Ex-President American Medical Editors Association, says:

The statement will be accepted by all, that fat is not the highest grade of tissue; its object in the anatomy being really as a packing material, externally serving for the artistic purpose of rounding out the lines of the figure in a manner to favor curves and that which is graceful rather than angles and abrupt prominences.

Fat in proper quantity favors comfort and favors the really beautiful, and smooths out the tangled threads of care and the wrinkled lines left by carking worries and the fuming and fretting of the every day annoyances of life. It does not exist very much as a necessity to the physique, but rather as an accessory. That there can be too much of a good thing goes without saying and the numerous mountains of flesh moving about our streets and hiding themselves in their homes, will give evidence in favor of the truth of this statement.

An excessive amount of this fat is not only unsightly, but is unhealthy; in fact, as an evidence favoring the thought that fat is a low grade tissue, we speak of other tissues degenerating into fat. Certainly the tendency towards the accumulation of an extra and unnecessary amount of fat favors a dangerous fatty degeneration of the heart and the tissue forming other important organs.

The proper selection of diet, with exercises, can no doubt do much towards the diminishment of fat; but the profession and the laity have long looked for some remedy which could be depended upon to assist towards this consummation devoutly to be wished. In Phytoline (Walker) we have such a remedy; this remedy being prepared from the active principle of the berries of the Phytolacco Decandra, after having been touched by the early frost. The remedy has been used for rheumatism for many years, and also for the diminishment of excessive glandular growths, and also as a helper for the drying up and reducing in size of breast of nursing women. Inflammation and abscess of the mammary glands have often been prevented by its use.

The reason for its acting favorably in these conditions have not been given. Clinically the results have been satisfactory. In a number of cases wherein I have directed the using of the Phytoline, for the reduction of fat, I have had favorable results, and I am persuaded that the profession is justified in the use of the medicament. I have never had any pernicious effects following the use of Phytoline, and I believe it to be a perfectly safe and a harmless, though a powerful antifat. I shall continue to watch results with interest.

Organic Changes in Gonorrheal Arthritis.

Dr. Valerio states that the gonococcus enters the circulatory system, causes a general infection, demonstrable by the ensuing fever, albuminuria and nervous symptoms which are observed during the acute stage. Dr. Valerio gives the following conclusions upon the organic changes in arthritis blenorrhagica:

1. The urine which is passed daily does not vary in reaction, etc., as it does during the course of the affection. Acid during the acute stage, this acidity diminishes quite perceptibly from the time of cure, which circumstance corresponds to the absorption of the exudates.

2. In the acute stage the elimination of urea is markedly diminished; it is notably increased on the approach of cure.

3. The chlorides behave like urea.

4. Inversely, the excretion of phosphates is increased during the first days of the trouble.

5. The leucocytes are slightly increased during the acute period.

6. The red blood corpuscles are increased during the later stage of the trouble.

7. The quantity of hemoglobin is in exact proportion to the number of the red blood cells.

Alcoholism in the Young.

According to one of our French exchanges the population in France is being decimated rapidly by alcoholism. Alcohol has become a part of the staple food of the home. Bread, coffee and eau-de-vie form the basis of the dinner, and frequently even coffee is absent. The most distressing feature of the case is the lamentable effect this use of alcohol has on the young. The infantile mortality is enormous, such as is met with nowhere else. Of fifty children who had come to the free dispensary of Dr. Brunon two began to drink coffee and alcohol before they were a month old, four at three months, two at five months, five at eight months, one at ten months, five at eighteen months, fifteen at a year and nineteen at three years. With these facts staring us in the face it can no longer be a matter for surprise that the population of France is diminishing year by year, that the rural population is degenerating, that crime and insanity are greatly on the increase, and that industry is on the decline.

Syphilitic Disease of the Heart Wall.

Phillips, (Lancet, Jan. 23, 1897). Syphilis may produce the same changes in the heart as it does in other internal viscera—either a general fibroid degeneration or gummata, or both of these results. In the heart the change is a replacement of the muscular tissue by a round-celled fibroid tissue, which, whether it occurs as nodules or as a more widely-spread change, leads to dilatation or hypertrophy, or mere rigidity of the heart wall, and has this uniform result that it impairs or interferes with the contraction of the heart. Pathologically, gummata are characteristic, whilst diffuse fibroid change may be due to causes other than syphilis, so that it is not possible to be sure of the etiology, except by the history or by the joint occurrence of gummata. Very small gummata may exist in the cardiac wall without giving any recognisable evidence of their presence during life, and, indeed, without producing any symptoms whatever. But gummata of larger size are of great importance, for they may cause sudden death in the prime of life in otherwise healthy persons. Necropsies show that it is only when a gumma is in the wall of the left ventricle and near the apex that it is capable of producing sudden death. But the histories of the cases, and such clinical evidence of those cases which have cleared up under treatment, show that there have generally been symptoms which, if recognised, might have led to successful treatment. These symptoms appear to be one or more of the following: Palpitation, subjective sensations about the precordium, attacks of angina pectoris, giddiness, faintness, or actual syncopal attacks, epileptiform seizures, and alterations in the force and frequency of the pulse, especially great rapidity, or in some cases irregularity. Two of these, angina and tachycardia, merit special attention. Angina is usually associated with physical signs or symptoms of heart or valvular disease, which can leave no doubt that the angina is dependent on the heart's condition. A gumma of the heart wall may produce angina with scarcely any other symptoms or signs of heart disease—a characteristic it shares with fatty degeneration of the heart, aneurism of the very root of the aorta within the pericardial sac, and also aneurism of the cardiac wall. Fatty degeneration, however, as a rule, occurs after fifty years of age, whereas syphilitic disease is set up generally at an earlier period, and a fatty heart is usually associated with other evidences of its presence, whilst in the case of gummata there will be a history or evidence of syphilis. In angina due to aneurism the sense of impending death is not so marked a feature, the pain often radiates down both arms, and there is a ringing second sound and frequently a diastolic murmur. In cases, then, of angina occurring before, say fifty years of age, unaccompanied by any other evidences of heart disease, a presumption of a gumma as the cause exists, and this may be strongly increased if there is a history of syphilitic infection. Tachycardia may be one of the earliest signs of syphilitic disease of the heart wall, but if unaccompanied by other symptoms, it must be very difficult, if not impossible, to distinguish it from a mere functional state.

There is no recorded case of sudden or gradual death from gumma of the right ventricle; but in all the cases of extensive fibroid disease of the right ventricle, dyspnœa has been one of the earliest and most constant symptoms. So that if dyspnœa occurs without lung disease, or left-sided heart disease, or other obvious cause, it is well to remember its possible dependence on some fibroid change in the wall of the left ventricle, and a syphilitic history may confirm such a view. Cases of general fibroid disease of the heart may be divided into two classes—those in which the weakened muscular tissue yields to the intracardiac pressure, and dilation results; and cases in which the heart-wall becomes toughened, stiffened, and thinned, with much loss of power but without dilatation. When the left ventricle dilates the evidences are the same as those of dilatation from any other cause, *i.e.*, subjective sensations about the cardiac region, or even angina pectoris, giddiness, faintness, or actual syncopal attacks with alterations in the force of frequency of the pulse, together with the physical signs of dilation of the left ventricle. The symptoms are often more marked than the amount of dilatation present would lead one to expect, probably because the fibroid change resists the dilatation to some extent, though greatly enfeebling the heart power. Death may occur suddenly or only after dilatation of the right ventricle, with symptoms of tricuspid regurgitation. When the right ventricle becomes affected, suffocative attacks of dyspnœa, ascites, albuminuria, with physical signs of tricuspid regurgitation result, but sudden death in the midst of apparent health apparently does not occur. Diffuse fibroid change without dilatation may occur in the case of the left ventricle; a progressive loss of power ensues, and the action of the heart may get extraordinarily weak, the apex beat becoming imperceptible and the first sound almost or quite inaudible, and there is a tendency

to giddiness, faintness, and syncopal attacks. Such cases are gradual in development, and are often put down to "fatty" or "weak" heart. Fibroid changes of the right ventricle without dilatation produces dyspnœa as its chief symptom, as in cases where there is dilatation. The heart may in some cases appear hypertrophied, due to the increase of fibroid not of muscular tissue. The diagnosis rests on the evidence of hypertrophy without obvious cause, without valve disease, albuminuria or history of pericarditis, or severe muscular exertion. The diagnosis is supported where the increased bulk of the heart, as estimated by physical signs, is not accompanied by a proportionate increase in power—a large heart with not well-filled arteries.

In support of his conclusions, Phillips gives the histories of many cases where considerable improvement ensued as the result of antisyphilitic treatment where previously cardiac tonics had failed, cases which apparently belonged to all classes recorded, both those of gummata of the heart wall and fibroid change with or without dilatation.

Therapeutics of the Internal Secretions.

Francis P. Kinnicutt, M. D. (Am. Jour. Med. Science). Experimental, pathological and clinical investigations have demonstrated the vital importance to the economy of the physiological function of the thyroid gland. There are two theories as to the nature of this function.

1. That its office is chiefly, if not wholly, a secretory one; that it furnishes some material which enters the blood, probably through the lymphatics, and which is essential for the chemistry of metabolism and for the proper nutrition of the various tissues.

2. That its function is to neutralize or destroy certain poisons which result from tissue changes, and which, by their tendency to accumulate in the blood, induce auto-intoxication.

Experiments show that the specific function of this organ can be replaced by a suitable dosage of preparations of the gland administered subcutaneously or by the digestive tract. It is directly indicated and most brilliantly effective in myxedema, cretinism, sporadic and endemic and operative myxedema. It is of some use in goitre, but is quite likely to aggravate the symptoms in exophthalmic goitre.

The use of thyroid preparations in the treatment of insanity was originally based on its undoubted power to increase ultimately all metabolism. Bruce believes that the action of thyroid in insanity is complex.

1. That the feverish condition induced by it is of benefit to the patient.

2. That It acts as a direct cerebral stimulant.

3. That it supplies some material necessary to the economy which the gland is supplying in insufficient quantity. Babcock, out of 22 cases treated, reported four recoveries from recurrent mania and melancholia. Allen Starr places the highest value on it in mental disturbances of the climacteric characterized by mental depression and morbid fears. So great a stress is laid upon this remedy by some alienists, that the favorable or unfavorable response to it is made a basis of prognosis in doubtful cases.

In obesity the reports in general are favorable; under the influence of the drug there is a decided increase of nitrogen as compared with the amount received in the diet. In skin diseases, save a few instances of psoriasis, but a small measure of success has been obtained.

There are also two theories advanced in regard to the function of the adrenals:

1. That their office is to neutralize or destroy certain toxins and effete blood-pigments which are constantly accumulating in the blood; that their function is excretory. This theory is based largely upon the apparent toxicity of the blood of animals deprived of their adrenals.

2. That their function is a secretory one; that they elaborate some substance which enters the circulation and which is necessary to the economy, its office being according to Cybulski, to maintain the activity of the vaso-motor centers, the vagi and accelerator nerves, the respiratory center, and with great probability, also, the center which maintains muscular tonus.

The writer tabulates 48 cases of Addison's disease treated by various adrenal preparations. Six are reported cured or practically well, 22 improved, 18 unimproved, and in two instances an aggravation of the symptoms is stated to have occurred during treatment. It has been used in asthenia, anemia and heart failure with apparent benefit.

The physiological basis for the therapeutic use of lhe thymus glands is a slender one. The favorable results in the first few weeks in which it was used in phthisical patients may possibly be referred to the stimulus of hope since favorable results from a new remedy are more frequently reported than failures.

In reference to the pituitary glands the writer thinks that the theories have but slender support, but it is probable that that organ bears some unascertained relation to

the nutrition of the bony and dermal tissues, as a result of which an overgrowtu of them accompanies changes in that gland. Hence extracts of the pituritary gland has been used for acromegaly with varying degrees of success.

Pathology of the Diarrheal Disorders of Childhood.

From an extended clinical and pathological study, (Medical Record) Baginsky concludes that the diarrheal disorders of childhood arising under the influence of high summer temperature are at first only functional in character, consisting in changes in the motor and secretory functions of the gastro-intestinal tract, with abnormal digestive chemism. In their further course profound anatomical alterations take place in the walls of the stomach and bowels, which may range between catarrh and necrosis of the mucous membrane. The follicular changes are processes of peculiar character and independent of the catarrhal, with which they may in the course of time be associated. They lead sometimes, in addition to superficial changes, also to ulceration. These changes are attributable not to specific bacteria, but to the ordinary saprophytic micro-organisms of the intestinal tract that assume especial virulence. Under peculiar circumstances other bacteria not ordinarily found in the intestinal tract may act as causes of diarrheal disorders. These also induce profound anatomical changes in the walls of the bowel. The invasion of other organs by these bacteria is not unusual, but is rather relatively common with regard to the kidneys. Under these circumstances the bacteria may cause profound anatomical lesions, even to the extent of suppuration. The transmission does not usually take place through the blood stream, the bacteria being but rarely found in the blood, and then only in small numbers. The most profound disturbances are occasioned by the fermentative products of bacterial activity, toxic or non-toxic. These are either of the nature of acids or products of albuminous degeneration, down to ammonia and its combinations, which behave as active irritants, and thus cause injury to the walls of the bowel. Further, through the blood current and the lymph stream they exert a degenerative influence upon other organs, especially those possessed of excretory functions, such as the liver, the kidneys, etc. Under the influence of this intoxication from the intestinal tract the resistance of the whole organism to the invasion of other pathogenic micro-organism is diminished, as is manifested by numerous complications.

Malarial Neuritis with Tremors.

Dr. Alexander James in the International Medical Magazine states that malaria may cause neuralgia, and that it is especially likely to affect the first division of the trifacial nerve, but may also cause cardialgia, gastralgia, etc. There may be painful affections of the sensory nerves, or localized paræsthesia or anæsthesia, or disturbance of function of some of the special sensory nerves, resulting from malaria. Malaria may cause paralysis, tremors, cramp-like muscular contractions, or even convulsive movements. These motor disturbances are most frequent in the face. Cases of epilepsy due to malaria which have been benefitted by the administration of quinine have been reported. These conditions are due to the malarial organism or its products, and in some cases the malarial element is easily overlooked. The writer describes two cases which presented symptoms of grave organic disease. In one case the pyramidal tracts seemed to be involved, and in the other the sensory parts of the cord appeared also to be markedly affected. In addition to the motor troubles there were disturbances of sensation and equilibration, somewhat like those of ataxic paraplegia. In one case degenerative changes seemed to be developing in the brain as well as in the cord. Two symptoms in these cases were especially noted by the writer,—viz., tremor in all the limbs and vesical disturbances. Malaria, like other poisons, may cause tremor. These patients were at first treated with iodide of potassium, salicin, and arsenic, without improvement. Quinine (5 grains) thrice daily was then given, and the amendment was as distinct as it was immediate; both patients felt stronger, physically and mentally; the tremor diminished and the vesical symptoms improved. Strychnine was also given hypodermatically, and later anarcotine was substituted for the quinine. Both patients, at the time the report was written, were still somewhat feeble. The writer regards these cases as due to malarial neuritis. In both patients the knee-jerks were exaggerated and ankle-clonus was present.

Causes of Subnormal Temperature.

Dr. Janssen sums up the causes of this condition as follows:

1. After the direct withdrawal of heat from the body, as in cases of exposure of unconscious or drunken persons in a very cold atmosphere, or after immersion in very cold water.

2. After the loss of great quantities of

fluids from the body, as in severe diarrhœa, enteritis, cholera, or profuse hæmorrhage.

3. In conditions of cachexia and inanition, such as cancer of various parts of the alimentary canal, severe forms of diabetes, pernicious anæmia; during convalescence from febrile affections, and in many chronic mental diseases.

4. In grave circulatory disturbances, as in cardiac failure.

5. In various diseases of the central nervous system, in tuberculous meningitis, at the onset of cerebral hæmorrhage and embolism, in some cases of brain tumor, and in general paralysis of the insane,

6. After irritation of sensory nerves, as in intestinal strangulation, in renal and gall-stone colic, internal perforation of the intestines, &c., and after surgical operations.

7. In extensive skin affections, such as scleroderma and extensive burns.

8. After fevers, where the temperature may long remain subnormal, or in the course of certain fevers, as in pyæmia.

9. In cases of poisoning by phosphorus, atropine, morphine, carbolic acid, and in alcoholic intoxication; also in the auto-intoxication of uræmia, and in diabetic coma.

In some healthy persous subnormal temperatures are occasionally observed without any apparent cause.

Gall-stones.

A. H. Ferguson, in the Tri-State Medical Journal, states that the diagnosis of occlusion to the ductus choledochus is not difficult, in the majority of cases, the chief clinical features being: 1. The history of cholelithiasis. 2. Pain—(*a*) referred; (*b*) local, over the common duct. 3. Tenderness elicited by finger-tip pressure is not over the fundus of the gall-bladder unless it, too, contains stones or is inflamed. 4. Jaundice is the sign of an obstructed common duct; chronic exacerbating jaundice is more charaeteristic of obstruction by a gall-stone loose in the duct than anything else. 5. Area of gall-bladder dullness lessened in chronic cases and increased in acute obstruction in a case that has had manifestations of cholelithiasis for a short time. The author believes that, in every case of biliary colic the gall-bladder enlarges during the first attacks. 6. Several slight attacks within a day or week, coupled with icterus, is strong evidence of choledochus-stone. 7. Vomiting may or may not be present; nausea usually is. 8. Emaciation is a late sign of this trouble. It was only well marked in one of his cases. 9. Chills and fever in 25 per cent. of cases (Courvoisier) Pyrexia was present in four of his cases.

For the treatment of stone in the common duct, whether impacted or loose, which cannot be extracted through the cystic duct and gall-bladder, choledocholithotomy is the ideal surgical procedure. Breaking up the stone with needles or forceps is: (*a*) Uncertain that complete work was done; the *debris* may not all escape with the bile and more or less injury (puncture or bruise) is done to the walls of the duct. (*b*) Less opportunity is afforded to test the permeability of the duct, for it may be obstructed lower down.

Cutting into the duct longitudinally does not appear to predispose to complications or sequelæ.

In the majority of gall-stone cases causing obstruction of the common duct there are also stones in the cystic duct and gall-bladder; then cholecystotomy should be the operation of choice, because (*a*) it is usually easy to remove stones from the common duct through the dilated cystic duct; (*b*) the safety of the patient from death by cholæmia is insured, and the patient may not stand any more; and (*c*) should a stone be left in the common duct it can be treated afterward by bougieing the ducts or by choledochlithotomy, in preference to cholecystenterostomy.

The author recommends the following technique: 1. Oblique incision when the gall-bladder is contracted. 2. Adhesion should be carefully separated in the line of search for stones and nowhere else. The fundus of the gall-bladder being found, it is followed on the under surface of this organ te the cystic and common ducts. The adhesions are cautiously cleared away along this route, but any that may be shutting off the general peritoneal cavity should be left alone. When the foramen of Winslow is reached the gastrohepatic omentum is palpated, for in it courses the ductus choledochus. If the adhesions are delt with as above described the subsequent drainage is easier and more efficient. 3. Incision of the duct is done longitudinally over the anterior surface of the stone. 4. Test the patency of duct by probe or water-test. 5. Suturing the duct is not at all essential for success, and may be harmful by (*a*) prolonging the operation and (*b*) by injuring the wall of a pathological duct that does not hold sutures. 6. Drainage, both tube and gauze, should be used.

A mother 10 years and 2 months old, with a plump healrhy babe, is reported by the American Journal of Surgery and Gynæcology as being the youngest yet heard from.

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IT CONTAINS NO TRACE OF ANY IMPURITY.—*The Lancet, London, England.*

A valuable aid to the physician in the treatment of all the graver forms of gastric and enteric diseases.—*The Prescription.*

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IMPERIAL GRANUM is acceptable to the palate and also to the most delicate stomach at all periods of life.—*Annual of the Universal Medical Sciences, Philadelphia, Penna.*

Endorsed by the best medical authorities in this country.—*North American Practitioner, Chicago, Ills.*

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It has steadily won its way, step by step until it now stands unchallenged at the head of all food preparations.—*The Medical Council, Philadelphia, Pa.*

Especially valuable in fevers, and often the only food the stomach will tolerate in many gastric and enteric diseases.—*Dominion Medical Monthly, Toronto.*

There is no better prepared food.—*The Medical Mirror, St. Louis, Mo.*

It enjoys so widespread an endorsement from the medical profession that its reputation is beyond dispute.—*American Medico-Surgical Bulletin, New York.*

We have used it with the best possible results in several cases of summer diarrhoeas in children.—*The Western Medical Journal, Fort Scott, Kansas.*

It is peculiarly adapted to most of the diseases of infancy and childhood that have originated in the use of improper food.—*The St. Louis Medical Era.*

It is one of those rare preparations that never disappoint—but is all that is claimed for it—*Maryland Medical Journal, Baltimore, Md.*

IMPERIAL GRANUM has stood the test of many years, while many competing foods have come and gone, and have been missed by few or none. But it will have satisfactory results in nutrition far into the future, because it is based on merit and proven success in the past.—*The Pharmaceutical Record, N. Y.*

★ 'Physician's-samples' sent free, express-paid, to any physician—or as he may direct. ★

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The Hygiene of the Kidney.

D. J. Henry C. Simes, of Philadelphia ("Diet. and Hyg. Gazette"), deals with the care of the kidneys. He calls attention to the relation between the skin and the kidneys, and observes if the skin is not in a healthy condition the kidneys have an extra volume of work to perform. The importance of a healthy action of the kidneys is manifested by the fact that serious trouble may arise in other organs, as heart, lungs, brain, and nervous system, when the excretory work of the kidneys is imperfectly done. In watching the action of these organs many factors must be taken into consideration, such as the nature of the diet, the amount of liquids consumed, the nature of the exercise, and activity of perspiration. Then, again, as the urine varies so much, a carrect examination cannot be made unless the entire amount voided in twenty-four hours be collected, and a specimen taken from this. The quantity of urine varies greatly with the amount of liquids holding the solid constituents of the food in solution. When it is remembered that nine hundred and fifty parts of every thousand of the urine are water, the importance of this element in the dietary becomes evident. On this point, the author is strongly of the opinion that the majority of men eat too well and do not drink enough water. As a result of this, there is deposited in the tissues many effete products that should be carried off by the kidneys. The work done by those organs is in this way interfered with, and in time organic disease often comes on. It is owing to the large amount of water that much of the benefit from a milk diet arises. In advocating the use of abundance of water with the solids, the author again calls attention to the danger of washing down the food with it, and taking time to masticate properly. While water is of prime importance, it cannot take the place of the saliva. The benefit derived from a sojourn at a mineral spring is almost entirely due to the flushing out the system gets. Waste products are dissolved and washed away by the kidneys.

The opinion is expressed that pure water drank for a lengthy period would have as good an effect. This of course applies to cases where there is no organic lesion, and efforts are directed against the ill-effects of a sedentary life and overeating. In advocating the use of water, its excessive use must be guarded against. The habit of taking too much water may be indulged in. This is the other extreme, and may result in harm. The effect of water is to make the kidneys act, and by over-drinking these organs may be overworked. The abuse, therefore, of water may prove the reverse of *in acqua sanitas*. In the cold season, warm clothing is of much value, as tending to prevent congestion of the kidneys. Should such happen, it must be relieved by acting upon the skin and bowels. Judicious bathing is useful, as tending to maintain the healthy action of the skin, and thereby avoid congestion of the kidneys. If many people drank more water, and used less solid food, kidney diseases would not be so common as they are at present.

Directions for a Vaginal Douche.

Dr. Byron Robinson, Chicago, gives the following directions for a Vaginal Douche:

1. Use a fountain syringe holding three gallons of water with a four foot head.

2. Begin with (married women) three quarts of boiled water at 103.

3. Increase the heat one degree at each sitting, until it is as hot as it can be borne.

4. Increase the amount of the douche one pint each time until three gallons are taken.

5. Use the douche in the morning and in the evening when retiring.

6. The duration of a three gallon douche should be twenty-five minutes.

7. The patient should lie on the back with the thighs flexed on the abdomen and the legs flexed on the thighs.

8. The douche should be taken on a level plane, the ironing board serving a good purpose, and not in the bed, on the water-closet or in the bath-tub.

9. The douche should never be taken in the standing or sitting posture.

10. A handful of salt (Na. Cl.) and a teaspoonful of alum may be added to every gallon, the salt to prevent reaction and the alum to astringe and check waste by secretion.

11. The vaginal tube used in giving the douche should be sterilized, and every patient should have her own tube.

12. A vaginal douche given according to the above directions will prove to be of much therapeutic value, in the treatment of pelvic disease, an agent to prevent disease, and a great comfort to the patient.

The Medical Gazette Publishing Co., of Cleveland, Ohio, announces a small volume soon to be issued with the title, "About Children." The author is Dr. Samuel W. Kelley, of the Cleveland College of Physicians and Surgeons. The book will contain six lectures, filled with information for nurses, medical practitioners, students and all who have the care of children. Advance orders will be filled in September.

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is a hypnotic of tried and approved value. It possesses undoubted advantages over other hypnotics in Prompt Effect, Reliable Action, Freedom from Evil After-effects and General Superior Therapeutic Value, as confirmed by contributions to current literature by H. C. Wood, W. Hale White, John V. Shoemaker, Chas. L. Dana, Chas. H. Steele, John Aulde, S. V. Clevenger, and many other authorities.

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PAMPHLETS CONTAINING CLINICAL REPORTS, MAILED ON REQUEST.

Case Illustrating the Incubation Stage of Syphilis.

Jonathan Hutchinson in Archives of Surgery says: I have just seen a case which may be added to the evidence which we already possess as to the length of the incubation stages of syphilis. A dentist had his finger bitten by a young soldier during tooth extraction. The finger inflamed at once and was painful, but there was no open sore until, in the belief that it was a whitlow, an incision was made by the side of the nail. After this the lymphatic trunks inflamed along the arm, and the axillary glands became swollen. The bite was on the 25th of July, the incision on the 20th of August, and on the 6th of September a measles-like eruption made its appearance on the abdomen. Thus, exactly six weeks had elapsed between the infection and the eruption. When I saw Mr. M—— on September 12th the eruption was abundant, and consisted of ill-defined, dusky, roseolous blotches, purely erythematous. The finger-end was still inflamed and the glands in the armpit hard. There was no obvious sore-throat, but on each tonsil were some small, indefinite filmy spots.

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CHRISTOPHER TOMPKINS, M.D., Dean,

Richmond, Va.

Fruit Diet a Cure for Nervous Headache.

We take the following interesting item from the Editorial columns of Modern Medicine:

Scientific investigation has shown that fruit is, of all foods, the most useful as a means of purifying the stomach and alimentary canal from germs. The idea formerly held by physiologists that germs were necessary as an aid to digestion has been proven to be groundless by the investigations of Nuttall and Thierfelder, who raised a guinea-pig in a glass house absolutely free from germs, and it proved to be stronger and healthier than others of the same litter raised under ordinary conditions.

These observations have been confirmed by bacteriological examinations of the stomach in several thousand cases by the chemists and bacteriologists of the Laboratory of Hygiene of the Battle Creek Sanitarium, which have shown that a healthy stomach is capable of perfectly digesting foods which are wholly free from germs without the presence of germs in the stomach. In this investigation, a test-meal of granose, a perfectly sterile food, was taken, and at the end of an hour a portion of the stomach fluid was removed and examined bacteriologically. It has been found that in healthy persons the fluid thus obtained is wholly free from germs.

A study of the germs found in the stomach in cases of disease has shown that they are, as a rule, incapable of growth in the juices of fruits. This led to the experiment of feeding patients whose stomachs were infected with germs, upon a pure fruit diet. It was found that the thickly coated tongue quickly became clean, and other symptoms of stomach infection rapidly disappeared. The observations made by Bouchard and Meinert and verified by a very extensive study of the subject conducted by the Battle Creek Sanitarium have shown that migraine, nervous headaches, sick-headach—and in fact most headaches—are due to the absorption of poisonous substances produced in the stomach and intestines by the fermentation and the putrefaction of the food substances. Hence it is clear that the best means of curing this condition is the disinfection of the alimentary canal, or the eradication of the germs from the stomach and intestines. The method of accomplishing this by the employment of an exclusive fruit diet has now been in use at the Battle Creek Sanitarium for more than a year, and with most excellent results. Not infrequently persons whose tongues have been thickly coated, resulting in extreme nervous exhaustion and a variety of other symptoms, have been relieved almost immediately upon the employment of a fruit diet.

The writer, while on a visit to New York, a few days ago, met a prominent business man who complained of a constant headache which rendered his life almost unendurable. Three or four hours after every meal he found himself suffering from severe pain in the head, unfitting him for business, and producing great depression of mind. A fruit diet was suggested to him. The gentle man exclaimed, "Fruit is the worst thing that I can possibly eat." It was suggested that such simple fruits as watermelons, peaches, and grapes might be taken without difficulty: but the gentleman declared that the watermelon was, of all things, the worst for him. The suggestion was then made that possibly the difficulty arose from the combination of fruits with other foods that were incompatible,—especially with vegetables. The gentleman was quite incredulous, but nevertheless said that he might make the experiment of eating fruit alone for a meal or two now and then. A few hours later as the writer was just about to take the cars at the station, he felt a tap on his shoulder; and on looking around, there was the gentldman before referred to. Said he, "I ate a whole watermelon for dinner, and did not have the slightest discomfort afterward, but I have got a splendid appetite for supper."

A fruit diet for a few days is vastly to be preferred to a dose of salts, mercurial products, seltzer aperient, or any other of the popular remedies for so-called "biliousness." It is not the liver that is at fault, as is generally supposed, but the stomach. A person suffering from biliousness is in a state of general poisoning from the absorption of poisonous substances from the alimentary canal. The majority of persons would find it advantageous to take nothing at all but fruit for breakfast, making the dinner the hearty meal, and the supper, if supper is taken, also of fruit.

Periodical attacks of "biliousness" may be avoided by adopting a fruit diet for a day or two prior to the time of the expected attack. A fruit diet for one day out of each week, or for an occasional meal will also prove helpful. In this country we suffer much more from over-feeding than from deficiency of food.

A physician who has given much thought to the subject says that so long as the cyclist can breathe with the mouth shut he is certainly safe so far as heart strain is concerned.

Practical Evidence.

I used your sample of Resinol on myself for Pruritus Ani, which has been my curse for several years, defying all applications. The first application proved efficacious, and I am now using and prescribing Resinol for the above and several other itching troubles. In fact, I think it is the best remedy I have ever used for the diseases for which it is recommended.

H. B. LEIGHTON, M.D., Boston, Mass.

I have used your Resiuol in Inflammatory Rheumatism with happy results. Hope others will try it. I know they will be pleased.

E. J. BURNSIDE, M. D., Phila., Pa.

It gives me pleasure to say that Resinol is the best application for local treatment of Eczema I have ever used. I can also bear testimony to its efficacy in Erysipelas, and its soothing and healing virtues in all inflamed surfaces.

A. S. FRENCH, M.D., Lawrence, Mass.

It is but just that I should attest my satisfaction with the use of Resinol. It is a marvel of efficacy in Pruritus Ani. In relief of soreness, due to scalding from acute Nasal Coryza, it acts like a charm.

J. H. THOMPSON, M.D., Goshen, N.Y.

Resinol is by far the best application I have ever used in a practice of 48 years for the diseases recommended. A case of Eczema commencing on the scalp and extending over the entire face and which had been under the treatment of various physicians with no apparent benefit, was completely cured by it in less than two weeks.

J, J. WORTHY, M.D., Lavalle, Wis.

I am very much pleased with the effects resulting from the use of Ung't Resinol in cases of Itching Piles, Pruritus Ani, and Vulvae, Eczema, Erysipelas, &c. In fact it is the remedy "par excellence" in all cases where there is a Congested or Hyperaemic condition of the capillary Blood Vessels. C. D. SMITH, M.D., Atlanta, Ga.

I frequently prescribe Resinol, and am well pleased with its work. It has proved very useful in many forms of eruption of the skin, and especially so in Pruritus Vulvæ or Ani, and in Eczema of other parts of the body.

LUCY HALL BROWN, M.D., Brooklyn, N. Y.

I take pleasure in stating that I have found Unguentum Resinol almost a specific for Pruritus Ani, Itching Piles and Marginal Eczema.

HENRY HUG, M.D., Detroit, Mich.

Resinol is a harmless antiseptic and a true skin anæsthetic, absolutely non-irritant and non toxic (free from lead, mercury, or cocaine), can be applied to mucous, excoriated or denuded surfaces of any extent at any age without fear of untoward results, and is not contra-indicated by any internal medication that may be deemed advisable.

Resinol is put up in *one ounce* jars at 50 cts. each, and can be obtained at any drug store. **Sample** sent **free** on application, or **one** regular size jar for trial on receipt of 25 cents.

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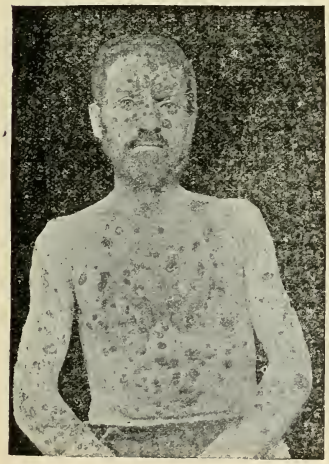

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Manganesii Iodidum,.....1-5 grains.

In Secondary and Tertiary Syphilis this preparation is considered by all the leading authorities on the subject to be the best. It should be given in teaspoonful doses, three or four times a day, and continued for several months.

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CHARLOTTE, N. C.

What is the Cause of the Excessive Mortality After Supra-Pubic Cystotomy?

Dr. Orville Hormtz, in the Medical and Surgical Reporter, explains that in Morrow's "System of Genito-Urinary Diseases" statistics are given of 744 cases of supra-pubic lithotomy. Of these 591 were in children under 14 years old, with 74 deaths, or 12.52 per cent. mortality.

Between 14 and 50 years the mortality was 12 per cent. Over 50 years, 33 per cent. The writer claims that he has performed supra-pubic cystotomy 70 times with one death. He gives the following probable causes of the excessive mortality:

1st—Want of proper preparation of the patient.

2nd—Over-distention of the bladder from a lack of knowledge of its capacity in its diseased condition.

3rd—Non-employment of the rectal bag.

4th—Over distention of the rectal bag.

5th—Extensive and unnecessary disection of the prevesical tissue.

6th—Lack of proper adjustment of a drainage tube of large calibre.

7th—Injury of the peritoneum by the knife.

8th—Loss of time at the operation from want of anatomical knowledge.

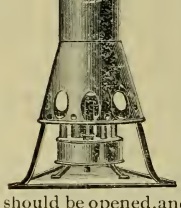
Sterility of the Male.

Dr. John G. Blake (Boston Medical and Surgical Journal) says, that the rare mention in medical literature of this subject is the chief reason for this paper. A short summary of the views of writers may not be out of place, and the report of two cases of a rare form of the affection may have some interest for gynecologists.

Sterility in the male is that condition in which, if there be any seminal fluid at all, it lacks all fecundating power. The absence of this power may be dependent upon one of two conditions, namely: the semen may be ejaculated in normal amount, but the spermatoza are either entirely absent or dead when discharged; this constitutes the condition of azo-ospermia. Or there may be a total absence of all seminal fluid, constituting what is known as aspermia. In both cases the act of copulation may be complete. As a corrollary to the above two conditions, we might mention malemission, the condition in which the semen is discharged into the male urethra, but is not ejaculated into the vagina.

Da Costa says the local anæsthetic effect of cocaine is much more rapid by heating the solution.

Directions for the Use of Schering's Formalin Disinfector.



The Disinfector should be placed upon a sheet of tin or upon a tray, and set upon an uncovered table or other firm support in the centre of the room that is to be disinfected. Windows, registers, and all other openings must be carefully closed. All cupboards and closets should be opened, and all articles of clothing, bed linen, etc., should be spread out, or, better still, hung up. The keyholes should be stuffed with paper or rags.

The container *r* of the disinfector is now filled with a greater or less number of Formalin pastils, in accordance with the necessities of the case. For the disinfection of a medium-sized room, 40 feet long, 10 feet wide, 10 feet high, or, say, 5000 cubic feet, about 100 pastils, or the contents of one package of 5 boxes, are required.* The reservoir of the lamp *b* is then filled three-quarters full of alcohol, or if wood alcohol is used it should be only about half filled, *and the filler cap is screwed on again. The wicks should be even with the level of the tubes, or at all events should not project more than 1 mm. (1-24 inch) above them*, so that the flames should not be too high and the apparatus not get too hot. For a complete disinfection of larger rooms, two disinfectors should be employed.

After all the wicks are lighted, the room should be left and the door tightly closed. If the Formalin vapor, which is absolutely innocuous, both to men and animals, becomes perceptible in the neighboring rooms their windows should be opened.

After 12 to 24 hours the windows of the disinfected room should be left open for some time, and the Formalin odor will entirely disappear. The vaporization of the Formalin pastils effects a complete sterilization of the room, killing all, even the most resistant, disease germs; so that the room can be used again for dwelling purposes with perfect confidence.

*For the complete destruction of anthrax spores, a procedure that will but rarely be required in practice. Dr. Hans Aronson found that about 2 pastils per cubic metre (35 cubic feet) were necessary. (*Zeitschrift fur Hygiene.* June, 1897). In the great majority of cases ½ to 1 pastil per cubic metre (35 cubic feet) will entirely suffice. After each disinfection, it is well to remove the small amount of ash that is found in the receiver *r*.

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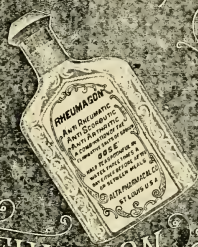

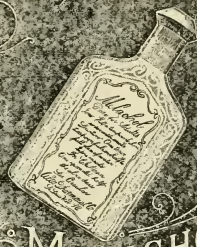

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SEND FOR LITERATURE.

Residual Gonorrhea.

Sanger, in Annals of Gynecology, states that in progressed gonorrhea, where the infection has long since been extinguished, there is left in the tissues numerous characteristics, even specific signs, which he terms residual. These residual signs may affect the vulva, urethra, vagina, uterus, adnexa, pelvic peritoneum, the parametrium and rectum. The vulva as vulvitis maculosa persistens—an affection of the mucous membrane of the vestibule around the duct openings of the glands of Bartholine. As a glandular adenitis of the glands of Bartholine, the glands being felt on one or both sides as hard nodules, the size of a pea or hazel nut, as a round or oval, shallow clearly circumscribed ulcer, which is exterior and inferior to the duct opening which he believes is a result of abscess of the gland rupturing after necrosis of the mucous membrane. Or a cyst of Bartholine's gland, which is the most frequent residual sign in the vulva.

The urethra as a urethritis maculosa externa persistens—the formerly described, sharp, limited, dark red spots or rings of the external meatus. As various forms of chronic urethritis, analogous to those of the male urethra described by Oberlander. As structures, which are the most common cause of vesical and urethral tenesmus where the urine is normal. As chronic periurethritis in the form of a ridge the thickness of the ring finger.

The vagina as colpitis maculosa persistens. The mucous membrane of the vagina and vaginal portion of the cervix especially those parts which have few folds, show dark red spots similar to the maculæ of the vulva. As colpitis granularis persistens, described as vaginitis papulosa. The granules or nodules are smaller and harder than those of acute granular colpitis of pregnant women. He believes also that certain cases of colpitis atrophicans obliterans and colpitis senilis hemorrhagica certainly depend on gonorrhea originally; also many cases of pruritis vulvæ.

The uterus may be involved as endometritis and meteo-endometritis chronica post-gonorrheica. He says in cases in which considerable time has elapsed since gonorrheal infection and repeated examinations of uterine secretions has failed to show gonococci, even where the discharge is quite purulent, and those in which it has been artificially increased, it is permissible to assume that we have to deal with a residual form of gonorrhea. As a perimetritis chronica post-gonorrheica this affection in a pure form, not as a part of a pelvo-peritonitis diffusa, is rare except as a gonorrheal affection.

The adnexa uteri and pelvic peritoneum. It appears as salpingitis, perisalpingitis, oophoritis, perioophoritis, pelvo-peritonitis chronica residualis.

The pelvic cellular tissue—the parametrium. Here it cannot be decided whether it is gonorrheal in origin until gonococci are found in the acute exudate.

The rectum. Strictures of the rectum he says, are obscure in etiology, but are to be regarded as largely gonorrheal.

Conservatism in the Treatment of Diseases of the Pelvic Organs in Women.

In the March issue of the University Medical Magazine, Drs. S. Weir Mitchell, Wharton Sinkler, Charles K. Mills and others in discussing the relation of nervous disorders in women to pelvic diseases said: "We have never seen a case in which ablation of the ovaries and termination of menstruation cured an epilepsy and in all our life have met with only four reflex epilepsies, none of which were from uterine ovarian or tubal diseases and we are inclined to think that some at least of the cases classed as epilepsies of ovarian origin are in reality excessively violent hysterical convulsions and we conclude that insanity is aggravated by the menstrual epoch whether normal or not, but that it is very rarely caused by that alone. A great deal of uterine and ovarian disease should escape the knife by the use of patient medical treatment—no grave surgery of the pelvis should be allowed without medical consultation," and by the conservative administration of Dioviburnia a Uterine tonic and Alterative, nervine and antispasmodic. In these opinions they voiced the sentiments of the great army of specialist and general practitioners.

We call the attention of our readers to the advertisement of the Robinson-Pettet Co., Louisville, Ky., which will be found on another page of this issue. This house was established fifty years ago, and enjoys a widespread reputation as manufacturers of high character. We do not hesitate to endorse their preparations as being all they claim for them.

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The Prevention and Treatment of Heart Failure from Anæsthesia Narcosis.

Dr. Dawbarn in the New York Polyclinic says the proportion should be ninety-seven of air to three of chloroform, the nearest approach to such dilution (without a specially devised apparatus) being obtained by employing the wire-frame, gauze-covered inhaler of Esmarch, the chloroform being administered a few drops at a time. Chloroform being a direct depressant to the heart, it is imperative that the index to unfavorable symptoms (the lowered blood-pressure as shown by the rapid action but lessened force and the pulse) should be closely studied.

Dr. Dawbarn discusses the treatment of heart failure under certain heads, calling attention to the fact that the greatest safety to the patient lies in the immediate and simultaneous employment of a combination of the most efficient methods.

1. *Inversion of the Patient.* This method is styled after its author—Nelaton—and is considered one of the best means at our command for combating heart-failure. According to the original plan the patient was suspended by the heals, the old theory as to its efficacy being based upon the idea that by force of gravity, the blood in the lower extremities and in the large blood vessels of the abdomen would flow onward to the brain and thus stimulate cardiac action by means of nerve-impulses sent out to that organ. Dr. Dawbarn's explanation of the increased heart action resulting from *inversion* is that the influence of gravity *sending an increased volume of blood to the heart*, causing dilatation, which in turn *stimulates the heart to increased action.* It is a well-known fact that, up to a certain point, the more work that is required of a weakened heart the more work it will perform. We see this demonstrated in the *compensatory action* of a heart suffering from some valvular disease, the leakage backward through the valves urging the heart to greater effort, in order that the proper supply of blood may be sent out into the general circulation. However this may be, the result is a fact, and to anyone who has had occasion to test its powers the effect has appeared almost magical. Respiration gradually returns, the heart's action is stimulated, the blood is once more set coursing through the arteries and veins, the temperature of the body rises, and the livid hue of death so lately seen upon the face gives place to the rosy tint of health and returning life.

Dawbarn's method of applying the principle just laid down, is done in a fashion that at the same time combines or embodies several other plans adopted by their several authors for maintaining the action of the heart or respiration. As soon as heart failure is detected, Dawbarn directs that the patient be pulled toward to foot of the table until its edge comes opposite the knees, the legs then being bent and forming a right angle to its surface. An assistant, grasping the ankles, retain the legs in this position while the table is inverted. Now the patient is in a position that admits of the application of methods of artificial respiration, of heart stimulation, or both. The hands of the operator now grasp the lower portion of the chest, the left thumb being placed in the intercostal space over the apex of the heart, and alternate compression and relaxation are made quite rapidly. The downward traction of the patient's arms by their dragging upon the pectoral muscles, favors inspiratory efforts, this, together with the compression exerted by the operator's hands, virtually duplicating, while the pressure over the heart by means of the thumb in the intercostal space, stimulates contractions of the heart.

2. *Heat*—May be applied in several different ways. A quart or more of water at a temperature of 118 deg. F. may, by means of a funnel, be poured into the rectum while the patient is inverted. Its action is reflexly. Another method of applying heat is by means of very hot moist cloths placed over the heart. Dawbarn believes its action to be due to stimulation of the cardiac ganglia. Again, hot water may be thrown directly or indirectly into the blood current, stimulating the centres of respiration and heart, these centres being situated in the medulla. *Hot saline solutions* are highly recommended, and they may be injected *intravenously* or *subcutaneously.* The temperature recommended is that of 118 deg. F., this temperature not endangering the vitality of the vessel walls or of the tissues of the body, while it does not affect the fluidity of the blood. The strength of the solution should be about one heaped teaspoonful of table salt to one quart of water, and the median basilic vein, or even some blood vessel in the field of operation may be used as the point for injecting. From one-half to one pint may be necessary for cardiac failure from anæsthesia (a fountain bag or glass jar, a rubber tube and canula being all that is necessary in the way of apparatus), the time required for the transfusion being from five to ten minutes. The saline solution should be boiled and filtered.

In shock from considerable loss of blood, the author sometimes uses several pints, his guide being the condition of the pulse.

3. *Cold*—Applied over the heart is mentioned merely because it has been tried by some. Dawbarn has no faith in it when the patient is "under anæsthesia to the surgical degree."

4. *As Drugs*, Dawbarn uses hypodermatically a combination of *strychnia* in equal parts of the tincture of *digitalis* and *strophanthus*. These remedies, he states, just as is the case with regard to the salt solution, he always has prepared when about to perform an operation under anæsthesia.

5. *Electricity* has been recommended and used, but the author believes it almost useless.

Directions for the Use of Schering's Formalin Disinfectant and Deodorizing Lamp.

The lamp should be placed upon a table, or on the floor in the middle of the room, the doors and windows, and other openings being closed. The keyholes should be sealed by stuffing them with paper or cotton. Closets must be opened wide, and all clothing, bedding, etc., must be spread out, or, better still, hung up.

The cup *e* should be removed, as it is used only for deodorization and inhalation, then the glass chimney *a* with the globular container *r* is taken off from the lamp *b*, and the container *r* filled with a number of Schering's Formalin Pastils. For the destruction of the less resistant disease organisms, such as the bacilli of diphtheria, typhoid fever, and tuberculosis, forty 1-gramme (15.4 grains) pastils, the contents of two of the small boxes, will suffice in a medium-sized room, 3 m, (10 feet) high, 3m. (10 feet) broad, and 8 m. (26 feet) long. Then the reservoir of the lamp *b* is about half filled with alcohol after unscrewing the burner; the wick is lighted, and so regulated that it projects about ⅜mm. 1-12 to ¼in.) *above* the tube. If wood alcohol is used as a fuel the wick should be about even with the tube (burner), as a too large flame will produce more heat than is required. More than 2 ounces wood alcohol should not be placed in the reservoir, which holds 4 ounces. The chimney *a*, with the filled container *r*. is then replaced upon the lamp. No one should remain in the room, and the doors should be tightly closed, since the large amount of Formalin vapor that is developed is very penetrating, and may be unpleasant, in that it causes lachrymation in the occupants of adjoining rooms. Nevertheless, it is expressley to be remarked that the inhalation of Formalin vapor is in no way injurious to health.

The apparatus once started, it may be left entirely to itself. The light need not be extinguished, since the lamp burns out with perfect safety. According to the flame, 2 ounces of alcohol or wood alcohol will burn from 4 to 8 hours. After 12 to 24 hours the room should be aired, and the Formalin vapors will quickly disappear. If the room is to be thoroughly disinfected, and the most resistant spores killed—a procedure that is not necessary under ordinary circumstances—two lamps should be employed, or the Formalin Disinfector can be used. For the preservation of food in larger rooms, the process is the same: for smaller rooms proceed as under II.

Auto-Intoxication.

Gustav Singer in the British Medical Journal discusses this question, with particular reference to tetany and skin diseases. He considers that some confusion has arisen owing to want of care in the clinical descriptions of gastric conditions, whence harmless atony of the stomach (gastroptosis) has been confounded with true dilation (gastrectasis). He quotes the following interesting case of autotoxic tetany:

The patient was a man, aged 41, who was attacked with diarrhea and weakness after eating roast pork; 3 days before admission to the hospital constipation set in, and this was followed next day by typical tetany. On admission the urine contained no albumen, but indican, diacetic acid, acetone, and aromatic oxyacid; the great curvature of the stomach extended down to the umbilicus. Under treatment with calomel and purges, followed by iodoform internally, the tetany cleared up and the condition of the urine became normal. There can be no doubt that in this case the tetany resulted from the absorption of poisonous products from the intestine, and was determined by the constipation.

The author is not inclined to regard the classification of chlorosis among the auto-intoxications with much favor, many cases so described really belonging to the group of secondary anemias; still, as Meinert has shown, chlorosis is often associated with enteroptosis. With regard to skin affections, Mracek found that in a case of psoriasis the ethereal sulphates and diamines in the urine were increased, and the author after investigating the condition of the intestine in a large number of dermatological cases, proved that all the signs of increased intestinal decomposition were present in

acute and chronic urticaria, in acne, erythema, and pruritis. These conditions were best treated by an internal antiseptic, such as menthol.

Kaposi has also obtained good effects in prurigo by the internal use of carbolic acid. Singer has seen two cases in children of the same family who developed purigo whenever their digestive systems went wrong, and recovered when these were cured. It must not be forgotten, however, that the skin is only capable of developing a certain number of eruptions, and that in consequence the same lesion need not always be due to identical causes.

The proof of auto-intoxication will depend mainly on examination of the urine and of the intestine. Constipation with stagnation of the intestinal contents is the commonest cause, and in cases where constipation and diarrhea alternate, rashes may come and go. In treatment the greatest attention must be paid to the diet, in order to diminish the bacterial contents of the bowel.

Malarial Fevers.

During recent years attention has been called to the fact that in some fevers of a malarial type quinine fails to exert its specific influence and that in these cases it is necessary to administer other drugs to supplement its action. A number of remedies have been employed for this purpose, but according to many physicians practicising in the malarial sections of this country the most pleasant and reliable among these is Phenacetine. Its advantages are that it not only acts as an antipyretic, but as a powerful nerve sedative, relieving pain and producing sleep. Thus Dr. David Powell (Occidental Medical Times) finds that five grain doses of Phenacetine repeated every two to three hours, often hasten the remissions in cases of malaria relieving headache and delirium. Dr. Jennings (Arch. of Pediatrics) considers this drug the best antipyretic in the malarial fevers of childhood. Dr. Guice (Virg. Med. Monthly) recommends Phenacetine in acute malarial poisoning when the temperature is high, and Dr. Eldredge (Med. & Surg. Rep,) has derived good results from its use in these cases. Dr. Bedford Brown (Charlotte Med. Jour.) also finds it of value in the autumnal fevers, while Dr. Coop (Memphis Medical Monthly) administered Phenacetine in typho-malarial and continued malarial fevers to reduce high temperature and relieve restlessness and pains. In the treatment of malaria Phenacetine will, therefore, frequently prove a valuable auxiliary to the cinchona alkaloids.

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Cod Liver Oil

If cod liver oil has been able to maintain its position as a remedial agent from a time "beyond which the memory of man runneth not to the contrary," its present popularity certainly has not resulted from any lack of sharp and sustained controversy. While the literature commending its utility in a wide variety of disorders is very copious, there has likewise been an abundance of articles, papers, and discussions, which contended that cod liver oil was merely a therapeutic fetich; that it possessed no virtue that did not likewise reside in all forms of food fat; that it was no more readily assimilable than good butter; that, indeed, it was a positive bane to the patient in its loathsome taste, its disturbance of digestion, its provocation of biliousness, etc.

In my opinion these dissenting views constitute a most erroneous and deplorable heresy. Quite apart from the colossal volume of clinical testimony which bears witness to the real, genuine and positive utility of cod liver oil in all wasting diseases, my own experience in practice sustains the view that cod liver oil is an agent of incontestable value when intelligently, perseveringly administered. . . .

The best and purest oil should be obtained, since the inferior oils are offensive in odor and taste. I thoroughly approve of a good emulsion when the microscope shows that it contains the *entire oil* in finely divided globules, and when I am satisfied that the percentage of oil claimed by the maker is present in the emulsion. Emulsification, moreover, forms a necessary step in the digestion of the fat, and the ready-made emulsion reduces the burden of labor devolving on the enfeebled digestive organs. The product which has given entire satisfaction in my practice, and to which I pin my confidence, is the egg emulsion of cod liver oil (P. D. & Co.). This product does not deteriorate, is most satisfactory in taste and flavor, and contains, by volume, full 40 per cent. of the entire oil. The absence of gum arabic, Irish moss, or the other emulsifying agents commonly used, is assuredly not the least of its advantages.

I have no faith in the so-called wines of cod liver oil, containing, not the whole oil, but an extract of the alleged alkaloids. As urged by Professor Winter, cod liver oil is a most complex body. Its beneficial properties reside in the aggregate of its constituent elements, and it is a piece of cruel jugglery to proffer a patient a part in lieu of the whole. The deception pointed out by Professor Hare—the entire absence of cod liver oil from some of the advertised emulsions—merits the severest reprobation of the profession. There should be a fixed standard for emulsions, and the physician should have some positive assurance that the percentage asserted on the label is actually present in the contents of the bottle.—Dr. Frank Webster Jay, in the *Journal of the American Medical Association*, April 3, 1897.

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Education and Hysteria.

Dr. Pitres says: "People are born hysterical, and do not become so. Where there is this hereditary constitution three principal factors may provoke the manifestations of hysteria; these are 'education,' 'emotion,' and 'contagion.' Education is a frequent factor. Nervous children, instead of being sent to bed early and kept free from excitement during the day, are by some parents obliged to work too much, or are excited by being taken to pay visits or by being allowed to play at noisy games. Sometimes they are taken to the theatre, or made to play little parts in private theatricals. Telling moving or terrifying stories is a faulty form of education, and especially instrumental in provoking hysterical manifestations in children thus constituted. M. Baralait has published a history of six children in one Brittany family who became hysterical after having been told stories about witches and ghosts. Dr. Terrier, in a thesis recently maintained before the Toulouse Medical Faculty, adds to this class of data.

Unguentine for Burns.

Dr. A. F. Beddoe, physician to the Buckner Orphan's Home near Dallas, Texas, recently read a paper with the above title before the Dallas Medical and Surgical Association in which he reports eight cases most of them burns of the third degree, successfully treated with Unguentine; no other dressing was used, and in all cases the healing was rapid, and in some no scar, while in others the scar was less than one-half the size that would be expected.

Case 2, was that from giant powder, and the patient presented the appearance of a rabbit with its skin removed from the body. The wounds were cleansed with carbolized water and Unguentine applied upon strips. No scar was left on the face or hands, and a new soft growth of beard has appeared.

Cases No. 7 and 8, were two boys among the twelve that were burned while escaping from the burning building of the boy's house of Buckner Orphan's Home, which was burned down January 15th, 1897.

Condensed from the Texas Courier-Record of Medicine.

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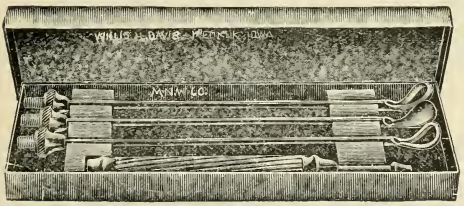

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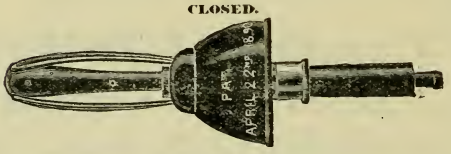

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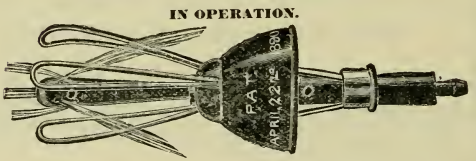

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The Charlotte Medical Journal.

Vol. XI. CHARLOTTE, N. C., OCTOBER, 1897. No. 4.

Some Remarks upon Summer Diarrhœa in Children.*

By Dr. J. A. Anderson, Danville, Va.

Some remarks upon Summer Diarrhœa of Children, the title of this paper, would better convey its meaning had the term "Dyspeptic Diarrhœa" been used. This disease generally begins as a functional trouble, as a consequence of the ingestion of improper food or bad hygienic surroundings. In other words, an attack of indigestion has been brought about from some cause. The food instead of being digested remains in the stomach for a varying period and gradually passes into the bowels still undigested. During the colder months of the year this may cause the child to have one or two actions showing signs of indigestion, without any evil consequences. During the hot months, especially June and July, the little sufferer may not fare so well. During the summer months there is no dearth of frugal micro-organisms; they seize upon every opportunity to make their presence felt. The undigested contents of an infant's stomach and bowels is no exception. These micro-organisms have entered with the food, and in the absence of the digestive fluids have set up a rapid decomposition, which soon causes more or less fever with vomiting and diarrhœa.

This is an irritative diarrhœa caused by a putrefactive process, due to the presence of micro-organisms and unless relieved promptly will sooner or later lead to inflammatory changes. In this case as in the colder months, the trouble may pass away through the efforts of nature—vomiting and purging—but as a rule there remains an offensive diarrhœa which goes on from day to day and from week to week until finally the child has been reduced to "skin and bones," and the mother then sends for a physician and tells him that her child is "teething."

This brings me to the main purpose of my paper which is: To bring to the attention of the medical profession the importance of enlightening the minds of the laity, and I am sorry to say, the minds of some of our practicing physicians, that "Summer Diarrhœa" and "Teething" are not synonymous terms. This idea has been an accepted fact among the laity from time immemorial and I fully appreciate the difficulty of the task for the enlightened medical mind to set them aright. This accepted fact, by the laity, has caused more deaths directly or indirectly than any single disease of childhood. The neglect of medical treatment at the proper time so often places the physician at a great disadvantage if not the disease beyond the reach of medical aid.

The average parent seldom seeks medical advice until there has been great wasting of flesh, or some complication has set in. They rest securely in the belief that the child is only "teething," and that this is a natural process and ought not to be interfered with. This belief is entertained by most every woman who has borne children, and too often by the family physician. There is no excuse for a physician to encourage such a belief, it borders on criminality. For the laity there are many excuses. It is but an exemplification of human nature when an effect is present to search for a cause. They are cognizant of the immunity which a child, under six months of age, suffers to a great extent from this trouble. After this age dentition commences, and it is rarely ever the case that a child does not suffer at some time during this period from diarrhœa. This idea is so deeply rooted into their minds that they generally ask, when seeking medical advice, "what is good for a child when it is teething." Every intelligent physician knows, when that question is asked, exactly what is meant and should endeavor to impress upon the mother the true nature of the case, assuring her that it is not necessary for a child to have diarrhœa because it happens to be teething, but when they do have it at that time it is but the more necessary to relieve it as soon as possible.

The laity has never considered the fact that as many children erupt teeth during the winter months as during those of the summer, and if teething was the cause of diarrhœa, there would be as many cases of diarrhœa during the winter months as we see during the hot season. But this is not the case, we see but few cases, and very trivial ones at that, during the former period, but an abundance during the latter period. We look forward to cold weather as a time when our protracted cases will commence to improve and are seldom disappointed. They

*Read before the Virginia State Medical Society, September 2d, 1897.

do not appreciate the fact that the infant is comparatively free from attacks of diarrhœa so long as it is fed exclusively upon healthy mother's milk. But when the mother begins to supplement its food by feeding it upon cows milk and little articles of food from the table, which is generally commenced a short while before, or about the time for the beginning of dentition, then you may expect and do have, sooner or later, derangement of the stomach and bowels in the majority of cases. They do not appreciate the fact that the hot season is the season for diarrhœa among adults as well as among children, and that the same cause which produces it in the adult would be equally liable to produce it in the child. They know beyond the shadow of a doubt that teething does not cause diarrhœa among adults, while the absence of teeth might do so. These facts of themselves ought, when properly presented, to cause the intelligent layman to stop and think.

There is no difference between the condition caused by the putrefactive changes taking place in the undigested food in the stomach and bowels of the child and the direct feeding to the child of decomposed food, except that in the latter case the symptoms come on sooner. When you are called to see one of these little sufferers the fact will be impressed upon you many times by the mother and others present that the child is "teething," but it "teethed so hard" that they thought best to call in a doctor. Many physicians recognizing the true condition of the case, but in order to avoid controversy and slurs against their intelligence, acquiesce in the diagnosis. Just let him assert that the condition is not due to teething—he cuts quite a small figure in their estimation—"don't know anything about children;" on the contrary, let him sit quietly, look dignified and wise, say nothing, with now and then a grave-yard expression and finally chime in, "the child is only teething." He has struck a harmonious chord, and hears many I-told-you-sos, and proceeds at once to apply the sovereign remedy—the gum lancet. If the case is mild he proceeds to split one gum; if moderately severe, he splits two, and if severe, he splits every gum in sight, and advises the administration of a dose of turpentine for fear there may be worms present also. A hum of approval greets his ears and causes every nerve in his body to thrill with rapture. He has exhausted the fountain of medical science, every thing has been done that could be done, the family is satisfied, and if the child dies no one is the wiser.

This is not an overdrawn picture, every physician who has practiced medicine ten years can testify to these facts, unless his experience is entirely different from mine, for I believe these turpentine and gum lancet doctors are pretty well scattered over this country.

That this impression has remained as long as it has upon the minds of the laity is due to the fact that the members of our profession have not attempted to correct it whenever an opportunity presented itself.

We have a State Board of Health, every city and town has a board of health. The end in view of these boards is to prevent disease and thereby the destruction of human life. Here is an idea which is almost universal among the laity, and I will venture to reassert, causes as many deaths as any disease of childhood, and is to a certain extent a preventible cause, is a cause as potent in the destruction of human life as bad sanitation, and is a cause which can be corrected in a very few years if every practitioner of medicine could feel it his duty to combat it upon all occasions. This trouble is very tractable when taken in time, before inflammatory changes have taken place and very obstinate thereafter.

I would not have any one to believe from the assertions heretofore made that the eruption of teeth cannot and never does cause diarrhœa; such a statement would be wide of the truth. The intimate relations of the cerebro-spinal and sympathetic systems of nerves are such that an irritation in one part of the human system may pervert the functions of an organ in a far distant part of the body, or even wreck the whole system. I can conceive how the difficult eruption of teeth may pervert the functions of the stomach and intestines, cause a dyspepsia and thereby set up a dyspeptic diarrhœa, and thus may be an indirect cause.

The subjects most liable to be affected by this disease are bottle-fed children, and a physician cannot be too precise in explaining to the mother the danger in the least degree of not carrying out to the letter the proper methods of preparing the milk, cleansing the nursing bottle and nipples, and the proper intervals of feeding, and the quantity to be given at a time. As this comes under the head of prophylaxis, I could not do better than quote from Keating's Encyclopædia of the Diseases of Children, the following:

"Every gastro-intestinal derangement, no matter how slight, should receive prompt attention, with the idea that at any time severe or even dangerous symptoms may supervene."

To summarize, prophylaxis demands:

1. Getting as many infants out of the city in summer as possible.

2. The education of the laity up to the importance of regularity in feeding, to the dangers of overfeeding, and as to what is the proper diet for infants just weaned.

3. Proper legal restrictions regarding the transportation and sale of milk.

4. The exclusion of germs, or their destruction in all foods given, but especially in milk, by carefully sterilizing milk and scrupulous cleanliness in bottles, nipples, &c.

5. Prompt attention to all mild derangements, especially in summer, cutting down the amount of food and increasing the amount of water during the days of excessive summer heat.

I have but a few words to say as to the medicinal treatment—an accurate knowledge of the causes of this disease and of the changes taking place in the gastro-intestinal tract are the all important items. As a basis of an intelligent treatment one point must always be uppermost in the mind of the physician, and that is that the fermentation or decomposition must be stopped before the child's bowels can be safely checked, and to never attempt to check an offensive discharge by the use of strong astringents or opiates. The fetor of these discharges is familiar to us all, and no physician feels that the way is clear until he has vanquished it by evacuants, dietetics, antiseptics or digestants. I will not presume to suggest my favorites among these different classes. Every physician has his hobbies and is wedded to his idols, and has gained his information from the same source as myself—reading and experience. His success or failure in the treatment of these cases will convince him of any error, and make a stronger impression upon his mind than any words from myself.

Habitual Constipation in Adults and Infants.

By Dr. J. M. Perkins, Lebanon, Missouri.

Habitual constipation has been a troublesome eye sore to the medical profession, and a matter of grave importance, as well as a difficult task to ascertain the cause of the disease in adults as well as in infants. We find young infants affected with this annoying trouble almost from the day of their birth, to that of three to five years of age, and often extending to old age. When you find it existing in either infants or adults, you will find a color in the appearance of the skin that you will not have in any other affection of the human system.

To ferret out the cause of habitual constipation in each case coming under your care for treatment, will not always be an easy task; while in each individual case there is a cause; for, without a cause, you cannot have an effect; but if my suggestions are closely observed, it will be less difficult with you than it has been.

The cause of habitual constipation has been discussed pro and con by the most eminent talent of the world. I have read articles from the pen of a great many of these famous writers, and listened to lectures delivered by some of the ablest teachers of our colleges, and none of them have advanced a cause of habitual constipation, according to my experience.

For me to try to promulgate a new theory, in the face of all these great authors; what according to my experience seems best; is a task I fear that I will not be able to do justice by. But history shows that some country doctors have presented ideas and theories that have been the means of saving human beings from an early grave, and laid the foundation stone for the advancement of many branches of our noble work; causing it to expand and grow into a grand, broad field of research.

Improvements and theories have in a great measure originated from minds least suspected. If I through my feeble efforts set forth a theory, through which would be the means of causing research along this line, that would in the future result in a lasting benefit to the medical profession, and a boon to suffering humanity, I will feel that I have accomplished a great good, and that my labor has not all been fruitless.

My mode of treatment is entirely original with me, as I have not read in any journal, or from any author, anything drifting in this direction. So I will now attempt to give my reasons as to the cause and course I pursue in the treatment of habitual constipation.

The cause I advance that brings on habitual constipation, as viewed from my limited experience and observation, are four. They are very often found jointly associated together in the same individual. They can be taken as the prime cause in the majority of cases, and are as follows:

Not enough water drank by the patient to liquify the fœcal matter and supply the blood with its necessary portion. Too great amount of uric acid in the system. A tense sphincter ani muscle. A neglect to attend to the calls of nature, at her specified injunction to go and evacuate the bowels. These are the sole and only cause of habitual

constipation, in adults and infants, where no organic trouble exists.

I have treated a great many patients during the past 17 years, and by the most potent remedies advised by, and laid down by our best authors, but never met with the success desired. I failed many times to cure my patients and often been greatly disappointed by the plans laid down by these eminent teachers and authors. I have often wondered the cause of the trouble, and if it was due to atony of the bowel, or from a lack of the proper want of nerve force, or to carelessness of the patient to evacuate the bowels when nature called, thereby cultivating the troublesome habit of irregularity. Observation caused me to notice that my patients whose system was overloaded with uric acid, was generally constipated and that in prescribing water to wash out the system, in conjunction with uric acid solvents, that their stools became more semi-solid. Also while treating patients for rectal troubles I observed that on dilatation of sphincter ani muscle with speculum that their bowels became more regular. This caused me to think that a rigid sphincter was probably in a great measure responsible for the constipated state which had been brought about from neglect. After I began making tests of urine in 1882, (which I now never fail to do no matter what the trouble, as I base more on the urinary tests in diagnosis than all other symptoms,) and placing my patients on uric acid solvents, I then had better success in a cure.

In 1883 I decided from what observations I had taken, that I would try dilatation of the sphincter ani muscle on the next patient coming under my care for treatment for habitual constipation, and give uric acid solvents at the same time to eradicate the acid, and watch the results of my new determined course. My first case was in December, 1883, which gave me satisfaction and grand relief as a cure.

The adult portion of our enlightened race never drink a sufficient amount of water, as a rule, to keep their system in a healthy state, thereby increasing the tendency of the system to become saturated with an over quantity of uric acid, and that connected with a neglect to be punctual and regular to always evacuate the bowels, either at evening or morning; (the latter preferred,) as it leaves the rectum empty on going to bed, and lessens the tendency to auto-intoxication.

It is just as easy and as necessary to attend to the evacuation of the bowels at a fixed time to preserve health, as it is to eat to sustain strength and gratify hunger. If we neglect nature by trying to avoid the desire to go to stool when nature calls on us to, and try to bring our sphincter ani muscle into a rigid contraction, avoiding defecation until a more opportune time, the desire is lost or passed off, leaving an overloaded rectum and rigid sphincter for 24 hours, when the call is again made, to be avoided if possible again, causing us to again bring a more determined effort to control our desire, cultivating a more rigid sphincter, thereby developing a strong and rigid ani muscle. A repetition of this very wrong and injurious habit, causes the sphincter to become very tense, and firmly contracted, loosing complete control of it, till we are compelled to resort to a purgative, and a very drastic one at that, in order to produce an evacuation of the alimentary canal. The bowels become accustomed to this mode and never act otherwise. The sphincter becomes more rigid and harder to dilate. It is also the case with infants. They get no water in a measure, and nine times out of ten their mothers drink very little water, with highly acid urine, and habitually constipated themselves, their offspring's bowels assume the same state of becoming habitually constipated. I will not go into the history of habitual constipation in infants, as the same theory holds good in their case as in adults, the cause of which I have already set forth. Little or no water to drink, acid urine, rigid sphincter ani muscle, brought about by the nurse or mother's neglect to teach the babe a regular habit of evacuating the bowels at a regular fixed time. Babes by natural instinct bring on constipation—grouped with uric acid, and no water—by trying to contract sphincter ani muscle, to control their bowels, to avoid the hot poultice of fœcal matter passed in cloth, and often left without attention for hours, to the annoyance of the little fellow. It is easy to teach the youngest child to be regular in voiding urine and evacuating the bowels, by removing the cloth and holding the babe near a warm stove, letting the heat come in contact with the babes exposed nates. Of course it is some trouble to the nurse, or mother, to do as above advised, but it is a great deal cleanlier and healthier for the babe. How often have we witnessed raw, excoriated genitals, nates, and thighs, all on account of neglect to follow the above course. The above is digressing from my subject, but should be closely followed nevertheless

I hold to the theory that people who drink very little water, are more subject to habitual constipation, and uric acid, than those who drink freely of water at the proper time.

You have all become familiar with many ailments that are associated with habitual constipation, many of which it is the direct cause. Such as deranged portal circulation, deranged digestion, of both stomach and bowels, torpid liver, palpitation of heart, tachycardia, brachycardia, neurasthenia, prolapsed uteri in females, prolapsed rectum, insomnia, vertigo, diarrhœa in aged, dyspepsia in its many forms, hemorrhoids, irritable prostate, diseases of the skin, and many others, all of which you more frequently find in clerks, book-keepers and seamstresses, and those who live a sedentary life.

Now as to the treatment, according to my experience. Have your patient cleanse the mouth and throat on rising each morning, then drink a pint of cold water, fresh from the cistern, well or hydrant; also, same amount two hours after eating the three daily meals. Dilate sphincter ani muscle with a good rectal speculum or fingers, the latter preferred. Dilate once a week; if stubborn, twice a week for two or three weeks. Also give 5 to 10 grains of soda bicarb two hours after meals. If digestion is poor give the following:

Papoid, gr. 10 (used pepsin before papoid was discovered); dil. hydrochloric acid, drachms iii; glycerine, drachms iv; tr. gentian, q. s., oz. iv. Mix. Sig.—Teaspoonful before meals in water.

Always place your reliance in the draughs of water and dilatation of sphincter ani. I have treated several patients by dilatation alone with a cure.

I insist on mothers, who are nursing young babes, to give her child water frequently, and also to drink as above prescribed themselves. If mothers have an excess of uric acid, give them large doses of soda bicarb, otherwise 2 to 5 gr. Dilate babes sphincter ani by finger insertion.

The above course, carefully and judiciously pursued, will, I verily believe, cure the most obstinate case of habitual constipation. Always impress your patient to be regular in the habit of evacuating the bowels at a regular fixed time, and go, no matter what his occupation, when nature calls; drop every thing and attend to the most important duty to preserve health.

I will now give a history of a few clinical cases which I have treated by this mode, and hope it will not be intruding on the valuable space of your Journal.

Case I.—Mrs. T., age 36, married for 10 years; never pregnant; confined to bed. Had been constipated from childhood; would go as long as 14 days without an evacuation. Called to see her December 11th, 1884. Found her greatly emaciated, jaundice, had no action for ten days, no appetite, pulse weak, heart action very weak, tongue coated, colon empacted with hard fœcal tumifaction, urine highly acid. Washed out colon with cold water, and gave treatment as above described, only that I gave sulphate of Soda instead of Bicarbonate, to relieve the jaundice and duodenal catarrh. Cured. Gave birth to a babe January, 1886, but died from a miscarriage in 1888.

Case II.—John R., age 18 months, bowels 5 to 7 days no action, had been so all his life. Cured by finger dilatation, once a week, for 9 weeks.

Case III.—Mrs. S. K., age 40, married, no children; had no action for 10 days; urine highly acid, drank very little water. Gave treatment in full as set forth in this article, dilating twice a week for three weeks, after that once a week for four weeks, then once every two weeks for two months. Cured. Has gave birth to two children since.

Case IV.—Mrs. J. G., married, six children; has been constipated from childhood, poor health, bowels would often go as long as 15 days without an action. Urine highly acid; impacted colon. Called to treat her June, 1886. Gave treatment in full, after emptying colon. Cured. Afterward moved to Washington.

Case V.—T. M., child, 18 months old. Father called at my office with child, which appeared healthy, only had severe attacks of colic, and his bowels constipated, often going a week without an action. Cured by dilating once a week with fingers, for six weeks, and having child drink freely of water.

Case VI.—L. S., age 21, male, drug clerk, single; had habitual constipation for 10 years. Called at my office June, 1896. Urine highly acid. No appetite. Seminal emissions when at stool. Acne pustulatum. Nervous. Restless. Insomnia. Easily fatigued. Gave treatment in full. Acne has almost disappeared, by opening the pustules with a small sharp pointed lance I made for that purpose, and applying oil of turpentine rubbed in well at bedtime.

Case VII.—Mrs. K. E., age 26, married, pregnant two months, had neurosthenia, palpitation, could not sleep, pyrosis, no appetite, urine highly acid, had dark swarthy appearance, poor health, had been constipated from infancy. Called me to see her May, 1897. I told her that constipation had brought on all her ailments, except her pregnancy, which she could attribute to other cause. Gave her papoid mixture and arsenauro for the nervous and sleepless state, after each meal and bedtime. Gave

her six dilatations. After a second one she became regular, slept well, ate hearty, color began to change to red glow on cheeks. Received a letter from her last week, her home being in Wisconsin, stating that her bowels were regular and that she felt better than any time for years. I had her take the full course of treatment, with above addition.

I could go on and give a report of enough cases to fill one whole issue of your Journal, but I think these sufficient, as they were a few of the cases of long standing.

I have often heard and read an old proverb or saying, that nothing succeeds better than success. So then the success I have with the above mode of treatment, which has proved more satisfactorily to me than all others, as to a permanent cure, will cause me to continue it until something better is presented.

I hope that these suggestions will impress the members of our medical brethren with sufficient force to cause them to try my plan of treatment to the full extent of my adopted course, and report the results, criticising all weak points, of my treatment, and what success they have met with and the failures if any.

Lock box 36, Sept. 1st, 1897.

Quinine versus Acetanalid in Malaria.

By T. S. Dabney, M. D., New Orleans, La.

Dr. Ben H. Brodnax, of Brodnax, La., has an article in the August number of *The Charlotte Medical Journal*, under the caption of "Some Thoughts and Other Things" that demands attention, as such articles, printed in a widely circulating journal, are liable to do a great deal of harm.

Within the past ten days, I have read an article in the Journal of the American Medical Association, Vol. 26, Feb. 1st, 1896, cautioning the profession against the use of Acetanalid, as recommended by Dr. Brodnax, as the author by its use had had the misfortune to poison two little children, one of them dying and the other narrowly escaping.

Dr. Brodnax has been exploiting what he calls the "new idea" in every available medical journal for some time past. As a matter of fact it is an antiquated, obsolete and dangerous idea, which lacks originality, value and reason. When the coal tar derivatives were first brought out, the medical world received them with open arms. They were hailed as panaceas in fevers, neuralgias, rheumatism, gout, and spinal affections. And truly the results often obtained from their use are remarkable! How often, after a small dose of acetanalid, or phenacetin, have I seen a child, racked with fever, and on the verge of convulsions, sink into a sweet sleep, bathed in perspiration and awake perfectly refreshed and well! I do not wish to be misunderstood; I know and appreciate the value of the analin series; but I know also as well the limitations of these decreasers of the ozonizing-function and oxygen-carrying power of the blood.

I will not attempt to answer all the questions raised in the article referred to, as my aim is rather to caution my colleagues against following the Doctor's advice than to prove that he, in his zeal, has been led too far. The Doctor requires active experience in the treatment of malarial fever in a Louisiana swamp of from five to twenty years. I have had that experience and more. I have treated the most pernicious forms of paludal fevers right under the equator on the banana plantations of South America, where the simple fevers (calenturas) promptly run into the pernicious fevers (fiebres paludicas) unless quinine be promptly given in a decided dose, 20 grains, for often you have no time for a second dose. These plantations are all irrigated, and as heat, moisture and all other suitable conditions for the plasmodia malariæ prevail there, malaria flourishes like the bay tree.

It may be stated as a fact, that no man can live six months in that country and be a disbeliever in the absolute certainty of the specific action of the Cinchona Salts in preventing, curing and eradicating malaria.

However, there are too many Don Quijotes, fighting windmills, for me to seriously discuss the value of quinine in malarial fevers. Fully 90 per cent. of fevers seen in this State are not of malarial origin, so Dr. Brodnax's 40 per cent. of failures are readily accounted for. His calomel and podophylin will cure a great many of the fevers of childhood, notably those of gastro intestinal origin. Acetanalid will cure a fair percentage, and time and vis medicatrix naturæ a still larger number. The Doctor is so in love with his treatment that he has forgotten the necessity of the diagnosis. If Dr. Brodnax will refer to the Index Medicus he will find that many, *very many* deaths all over the world have been laid at the door of acetanalid. That the cyanosis produced by acetanalid is not so dangerous as was once thought, is due to the fact that the conversion of arterial blood to venous (apparently) is caused by the reduction of a large amount of hæmoglobin to methæmoglobin and not by the presence of a large quantity of carbon dioxide in the arterial current.

Dr. Brodnax states that 65 per cent. of deaths occur in cases of hæmaturia treated by quinine, whereas the mortality resulting from this dreaded form of malaria falls to 15 per cent. if quinine be dropped and other treatment pursued. Without advocating quinine in this affection, you will pardon my citing a few facts and figures on its use. Turpentine is largely used in this section in this disease to the exclusion of quinine. The nausea often seen in these cases precludes the possibility of giving quinine per orem, and as that given per anum is very slowly absorbed, we have to resort in such cases to the hypodermic method, which, by the way, is the *only* safe method of having the remedy absorbed in these rapidly fatal cases.

Permit me to quote this table from the records of the French Hospital of Goell, Senegal:

	Cases.	Deaths.
Small doses of quinine—calomel purge, - - -	71	31%.
Moderate doses of quinine—calomel small dose, - -	69	19%.
Small doses of quinine—purgative treatment, - -	83	31%.
Large doses of quinine. -	73	7%.

Dr. R. D. Webb, in Medical News, April, 1883, reports 33 cases with 2 deaths, and the stomachs of both the fatal cases failed to retain the quinine, and the Doctor did not resort to the hypodermic needle. In these cases heroic doses were exhibited.

Dr. Webb acknowledges that *small* doses of quinine often increases the hæmaturia, but claims that, should such a result occur the remedy must be pushed, and not discontinued. I am well aware of the fact that many men of wide experience in hæmaturia denounce the use of quinine, yet these men may have failed to administer the remedy in sufficient quantity or by a suitable method.

In conclusion, let me assure Dr. Brodnax that no work, to my knowledge classes the coal tar series among the anti-periodics, nor does any authority claim for them any specific effect on any form of bacilli, Laveran's, Koch's, Eberth's, Klebs-Loeffler or Sanarelli's.

Let me beg the Doctor to take the cork out of that bottle of quinine that has been standing for two years on his office shelf, and to use its contents freely in all cases of true malaria coming under his care.

The question of *giving* quinine in malarial diseases, fevers, diarrhœas, dysenteries, neuralgias, etc., no longer exists, the method of its administration being alone under discussion.

1466 Magazine St

Skin Grafting.

By James W. Squires, M. D., Churubusco, Ind.

Skin surgery like surgery in all parts of the body is intended to redound to the benefit of man. But again skin surgery like all other surgery may be a blessing or a curse and both not unlike power, as says the philosopher, may be a bad as well as a good thing, owing wholly to the application. Power if wrongfully applied may cause the machinery to run in the very opposite direction from which it was intended and dash everything before it to splithereens, producing widespread destruction, ruin and dismay in its wake.

Surgery if it be wrongfully applied though it be ever so skillfully performed will produce legions of empty coatsleeves unnecessarily, produce a demand heretofore unheard of for patented legs and crutches; eyes that turn neither up nor down, out nor in and see not; noses without schneiderian, vomer, mucous or sense; bodies without wombs and wombs without appendages rendering God's effeminate creation barren and his six days work a miserable failure.

The renal, the splenic, the mesenteric and the hepatic arteries, the abdominal and thoracic aortics may be successfully ligated by the skillful hand of the scientific operator, but if the death of the patient is required in the completion of the operation, what has the operator gained by his surgical manipulations? But the true mission of the surgeon is to save life, to prolong life, to relieve suffering, to correct and avoid deformities and to add to the pleasure and convenience of man and his every effort should be to this end. Sergeons of today know better what to do and how to do it than ever in the history of the world. Step by step have we been groping our way in darkness. Year after year has knowledge added light that has pierced that veil of darkness. We have been stepping and stumbling, groping and prying for 400 years, and now all the light we have is due (not to Schlatter's miraculous revolutions and through him to the world) but to the scientific, progressive demonstrations of experimentors. First they learned that the bone button from the trephine, if replaced would reunite and grow; that teeth extracted if carefully replaced would again become useful members; that fingers and toes when entirely separated from hand or foot, if properly readjusted to parent stump would be revitalized and fill their former offices, and fingers have been successfully taken from

the hand of one man and put upon the hand of another, which fact may yet be of inestimable importance to the world in cases of R. R. wrecks and military and naval encounters. Noses have been constructed from the skin of the forehead,cheek and forearm. Lips have been made from the skin from the cheek, chin and other parts of the body. But it has remained for progressive men of thought and genius and of mechanical ingenuity of the present time to reveal to the world that human skin once destroyed can be restored to man from skin taken from another, be he black, white or copper color, male or female, dead or living, dog, frog or fowl, biped or quadruped, haired or feathered it matters not.

When to graft and how to graft are now the questions. Upon these two questions we have about as many different authorities as we have operators, each claiming his method of procedure the best, however they all agree in the main. That is that granulating surface must be healthy; that the skin from which you take your grafts must be if possible perfectly clean; and that it must be kept as near clean as possible after the grafts are set. Erichson in his work on surgery says,"clip the grafts off with a pair of slightly curved scissors and set them upon the granulated surface" and leaves us in the dark as to how many or how close together to set them. Wythe says in his work on skin grafting, "place the grafts one fourth of an inch apart." That means that it would require 16 grafts to cover one square inch of surface. The Alabama Med. & Sur. Age in a recent date in an article on skin grafting says, "commence a row of grafts one and one half inches from the sound skin. Place your grafts from ¾ to ¼ inches apart and continue the row entirely around the wound. Then plant a group of 20 grafts one and one half inches from the row of grafts, placing them close together and so continue to plant groups of 20 (not blocks of five) one and one half inches apart, until the entire wound is covered. After the grafts take, fill in the intervening space with grafts placed close together and so continue to graft until the wound is covered or healed." He says in this way you will save time and he might have ingeniously added (if you do skin a County to patch the back of one man).

But still they come, faster and thicker and more of them with almost incredulous reports, but coming as they do from reliable sources, we may safely wager our last dollar upon the truthfulness of the statements. Dr. Lusk of Warsaw, N. Y., in the Medical Review, Dec. 7th, 1895, page 800 says,"I have successfully covered 800 square inches of granulated surface with epidermis raised by scalding brine." Dr. Freeman of Denver, Colo., in same Journal of Jan. 25, 1896 says he has done successful skin grafting with epidermis from cantharides blisters. Dr. Robert T. Morris in his book on appendicitis says among other things, "skin grafting may be done successfully with skin raised from blisters." And authors are on record where epidermis has been preserved for 48 days after being raised by blisters and then successfully used in skin grafting. This being true it is altogether probable that grafts could be taken from the integuments of Natives in the jungles of Africa or from dead Grecian or Turkish heroes on the battlefield of Crete with which to patch the backs of worthy, needy, deserving, partially skinned Americans. But of all the operations and experiments I have read, I have seen none that were made with other than human skin. On New Years day, 1892, assisted by my son Lloyd, now of Dryden, Arkansas, in presence of relative and friends of the patient, who were not heroes enough to furnish me skin with which to patch, and the patient was so enfeebled that it would have been little less than manslaughter to have taken the grafts from her, I utilized chicken skin. Experimentally, I planted 26 grafts from a living hen covering nearly 100 square inches of granulating surface. They nearly all grew and made a good firm integument. Had we reported the success of the experiment we might now stand with the foremost successful experimenters of the world in plastic surgery of this kind. This being true what have we gained from experiments with epidermis raised by blisters of any kind.

I wish now to express my indebtedness to the Medical Brief for extending our knowledge to new fields for successful skin grafting. Mrs. L. accidentally fell striking her right breast upon the edge of a washing-tub fracturing 4, 5, and 7th ribs and dislocating 6th, at Sterno cartilaginous conjunction. A tumor dated from the accident which gradually enlarged, became painful, feverish and nodulated and was thought principally on account of family history to be cancerous, father and one aunt of father having died of that trouble, and was accordingly treated for cancer, the tumor being injected close to base at six equidistant points. The entire tumor weighing seventeen ounces dropped off on the thirteenth day which now revealed the true nature of the tumor. The ribs had been broken and had not healed but had necrosed, and the dropping away of the tumor left the ribs exposed, the pleura drop-

ping from the ribs and resting upon the lungs. The ribs were now removed by the use of bone forceps leaving a surface of exposed costal pleura six inches in diameter. The wound was dressed antiseptically, after four weeks, healing had so far progressed that there was union of skin and pleura around the entire surface, surface being now five inches wide and six inches long. Skin grafts were now placed one half inch apart by piercing pleura, lifting grafts, and setting them edgewise in the pleural punctures. The grafts grew so nicely and so rapidly that in four months the wound was entirely healed, covered with good healthy skin forming a good healthy wall of protection to the chest cavity.

Now in conclusion permit me to say, a man may read of the beauty of a morning sunrise but until he arises from his slumber before that old orb of day is in his glory and for himself beholds him casting his first forked darts of furnished light across the rock ribbed, river-intercostaled, valley bound earth, causing mountain peaks to shine and glitter like a multitude of giant shafts of silver plated pyramids, he can not comprehend one half its beauty. Neither can he enter into the spirit and the pleasure of mountain trout angling from reading from the pen of others of their success and delight, but must of necessity cast the line himself, hold the pole, see his cork bob, feel the pole tremble, and land with his own hand at least a few (the more the better) of the sporty finny beauties. Who can give the thrilling anxious pleasure that borders upon fear by painting a pen picture of the chasing and felling of Buck, Bull or Bison that the man experiences who enters spirit, soul and body into the chase himself and with his own eye beholds the forest beauties in Nature's all but unmolested parks and fells them with his own hand? Then it is, he feels his bosom heave with pride and his heart beat with joy. But in the language of another who can write poetry who has not himself beheld the innocent bull calf placidly pumping the lacteal fluid from the parental reservoirs. Who can tell us what to do and how to do it, who know no how nor when themselves? Nevertheless we have plenty human belated, blatherskitish, monstrosities in our profession who flamboyantly pose as professors, authorities, skilled operators, diagnosticians, and practicioners who never treated unassisted any of the diseases of which they write, and who never made an operation in their lives, and are not and never were even care-considerate observers. Only by their works are we to know such men for God knows we have no other means by which we may know them for they never did anything except on paper. Such operators we would perhaps reluctantly term professional theorists or possibly plagiarists. From them we receive such welcome (?) gratis advice as the old maid gives the mother on how to bring up her children; or as the old bachelor who has kept his animal magnetism and whole child begetting paraphernalia in a veritable refrigerator until he has lived out five-sevenths of his alloted time and is so sexually atrophied, so passionately dead that there does not remain in him gallantry enough to win a wife and he has become such a sexual pervert that he couldn't beget a child were a fair one thrust upon him by either act of providence or force of circumstances, would give the gay young Buck's of the country on courtship.

Now on skin grafting I am advised by all the authorities, it has been my pleasure as well as privilege to read, to place all the way down to 16 and all the way up to 64 grafts to the square inch. Without any disrespect to my professional brethern I wish to say that my experience has not been as I have heard some operators say of theirs, unlimited, but quite extensive in this line of surgery, for a common country practitioner confirms me in the conviction that we are advised to use from sixteen to sixty four times as many patches as necessary. I have successfully covered a patch of human anatomy 17 inches long and 7 inches wide or 119 square inches of surface with 44 skin grafts and did that too 105 days after the receipt of the injury and after Nature had covered 52 inches of the original wound, during which time the wound had been a sloughing granulating surface so reducing the vitality of patient that it was but a mere skeleton too feeble to sit up unassisted, from this and various other causes I am thoroughly convinced that skin grafts placed one to the square inch will cover the surface with good healthy skin in good healthy subjects even though but one third that number live. It is unnecessary martyrdom to skin a County to patch a single back.

Death of Dr. Cornelius Kollock.

The death is announced of Dr. Cornelius Kollock at his home in Cheraw, South Carolina, on August 17th. Dr. Kollock was graduated from the University of Pennsylvania just after the war and then went to Europe, where he studied under Velpeau. He was one of the most eminent physicians in the South and an authority on abdominal surgery.

Surgical Puerperal Septicemia.*

By Dr. W. L. Michael, Sherman, Texas.

By surgical treatment of acute Puerperal Septicemia I do not mean curettement, or any of the minor surgical procedures which are practiced by all well informed obstetricians of to-day.

These procedures are no longer in dispute, having been settled in the great school of experience years ago. Celiotomy for the relief of this condition is not so well established, and the object of this paper is to call out a free discussion as to whether it is a rational procedure, and if so, whether it may not be the best thing possible in these unfortunate cases. An objection that will be urged is the septic condition of the patient and her surroundings, making an abdominal section extremely hazardous. This is not an insurmountable obstacle. By the free use of sterilized water and antiseptics the field of operation can be rendered aseptic and kept so. Certainly a thorough septic puerperal patient, with a stinking vaginal discharge, and all the other familiar symptoms, does not suggest to the operator a very pleasing picture, neither do the unoperated cases to the obstetricians. A bad case is a bad case in the fullest sense of the term.

Few diseases have a higher rate of mortality than Puerperal Septicemia caused by a uterus and fallopian tubes full of pus. In the older writings, which are not so old either, as five years in surgery now is an age, we find many subdivisions of the results of Puerperal Septicemia, each discriptive of the pathological condition present, such as metritis, of which there are several subdivisions, endometritis, perimetritis, salpingitis, ovaritis, cellulitis, adenitis, abscess of the broad ligament, localized peritonitis general peritonitis, and in fact all the itises which can be tucked into any part of the female anatomy. Understanding the cause as we do to-day, we can see a direct thoroughfare for the streptococcus, or any of his numerous kin, to the organs receiving the brunt of the battle.

Infection takes place in one of two ways, either by direct infection through the vagina, uterus, fallopian tubes, and so on, into the peritoneal cavity through the fimbriated opening, or by way of the lymphatics.

In every parturition there is some tear or abrasion, and if these wounds become infected the septic material is quickly taken up by the lymphatics and carried to other parts of the body. True, nature makes an effort to stop the progress of infection by throwing out a barrier of lymph and she is often successful, but the most common route of infection is through the genital organs themselves. After parturition the uterus is in mueh the same condition as an open wound, in fact is one, and here again nature begins her work of resistance. Barriers of lymph are thrown out and the tubes may be temporarily closed up and the infection may be confined to the uterus or the tubes themselves may be involved, and we have a pyosalpinx which may result in an abscess of the broad ligament or the ovary may become affected and an ovarian abscess follow. I believe peritonitis is always local in the beginning, and if the process can be checked by any means, surgical or otherwise, it never becomes general; and now what are the best methods for removing this localized infection, supposing the infection has got beyond the uterus, which it sometimes quickly does before the physician sees the case. Curetting and intra-uterine irrigation will do no material good beyond limiting the amount of infection from this source, and often this is not enough; unless something more radical is done another death from child-bed fever will be recorded. At this time the tube may be filled with pus and the ovary approaching destructive inflammation, or the pus in the tube may be squeezed through the fimbriated opening and a rapidly fatal peritonitis supervene. If we have diagnosed pus tubes or suppurating ovaritis, is not a celiotomy clearly indicated. Nature, if left to herself, tries to imitate the surgeon, but her surgery is notoriously bad. She is obliged to open abscesses in the track of least resistance, and often evacuates at points remote from the pus cavity if she don't wear the patient out before she completes the operation.

Robert T. Morris has said that nature sometimes attempts surgery, but is more of a success at making lillies. If we had an appendix full of pus and ready to rupture, we would not leave the case to nature. Does not a fallopian tube, in the same condition, require the same treatment, even if it occurs in the lying-in period. Many patients do not die immediately, but finally succumb to sepsis weeks or months later, and their deaths are not directly attributed to puerperal infection. I remember a case which occurred in my early practice. A primipara was delivered of a dead macerated fœtus at the end of the seventh month. Nothing unusual was noticed for nearly two weeks, when she began complaining of severe pain in the pelvis, which was followed in a few hours by chill. This was

*Read before the Grayson County Medical Society.

the beginning of a long seige of sickness, accompanied by chills and fever, great pelvic and abdominal pain, gradual loss of strength, and extreme emaciation. I remember I could make out hard, irregular masses in the groin, on both sides, and that the uterus was firmly fixed and immovable, but I conscientiously douched, and poulticed and hypodermiced her until she fell into the hands of another physician, who blundered along as I had done until death came to her relief. Looking back into the light of recent surgical advancement the diagnosis is plain, and a clear pus history easily recognized. I firmly believe that a laporatomy done soon after the first chill would have saved this woman's life.

What is to be done depends on the stage of the game. With the uterus primarily affected, in the early stages, it is difficult to decide when the sepsis has gone beyond our reach. If the lymphatics are involved it is useless to talk surgery. If the indications are clear, and the case is seen in the early stages of the sepsis before the lymphatics are involved and beyond our reach, thorough curetting and irrigation under antiseptic precautions is a safe and satisfactory procedure. Operation done early will avoid all the different itises, which are but extensions of the septic process by direct continuity, in the large majority of cases, and have only metritis, salpingitis, and possibly ovaritis upon which to operate.

Since, as was said in the beginning of this paper, the object was to call out a free discussion of the subject, I will invite the discussion by asking, is not the danger to the patient greater when left to nature and the doubtful help of drugs, than when an early operation is performed? And we should never forget as is sometimes done, I am sorry to say, always to make an accurate diagnosis. As to the danger to the physician if he operates and the patient dies, I have nothing to say.

Letter from Dr. Woodbridge.

My Dear Editor:—Will you again grant me a little space in the columns of your excellent journal—this time not "to beard the lion in his den" but to thank him for touching so gently a—perhaps too sensitive—wound. If all of the criticisms of the "Woodbridge Treatment" had been couched in the fair and courteous language in which Dr. Register so gracefully "defines his position" on the subject, there would have been fewer controversial wars in medical societies and Journals during the last few years. I should not have been driven into so many heated discussions or forced to make so many acrimonious retorts to inurbane criticisms. I would like however to call Dr. Register's attention to one or two points in his definition with which I cannot concur. He is quite correct as to the difficulty of making a positive and an exact diagnosis of typhoid fever prior to the sixth day of illness, but it is not always, nor is it generally impossible to abort the disease on or even after, that time. Besides a vast majority of cases present symptoms which would excite suspicion in the mind of an accurate diagnostician as to the character of the disease, earlier than the period mentioned, and a careful physician, solicitious for his patient's highest interests, will then institute the treatment, which in his opinion promises the quickest, easiest, most certain, and most complete cure. Under these circumstances, the judicious application of the Abortive Treatment will frequently be followed by such quick and complete recovery that no pathognomonic symptoms will be present. These cases cannot, of course, be reported as cases of aborted typhoid fever, but physicians who use the abortive treatment and see their cases of the fully developed disease, diminish in numbers, as those which are aborted increase, soon learn to appreciate the fact, that they are jugulating typhoid fever. In other instances, the disease will be so minified or ameliorated that the patient will be able to be about the house or he may be even taking out door exercise, while bearing abundant crops of characteristic rose spots—evidence of true typhoid. Other cases coming under treatment a little later will be as quickly and apparently as perfectly cured, as are those in either of the preceding classes, but the disease may leave behind necrotic or ulcerated Peyer's glands, which are liable, on the slightest indiscretion, on the part of the patient to pour forth alarming and sometimes fatal hemorrhage, or end in perforation and death. A number of such cases have already been reported as have also a number in which copious intestinal hemorrhage has occurred during the course of the treatment, apparently without interfering in the slightest degree with the patient's progress toward recovery.

The Diazo Reaction of Ehrlich has been present in many instances in which the disease has been "cut short," but, as Dr. Register wisely suggests, it is to the Serum test of Widal that we must turn for the most positive verification of the clinical diagnosis of typhoid and recent as this great discovery, there have already been presented enough clinical charts and reports of cases in which the disease has been jugulated after

the serum of the patient has shown positive reaction on the Bacillus of Eberth, to establish my theory.

These facts, with hundreds of other evidences, equally convincing, justify me in very respectfully taking exception to Dr. Register's contention "That we are not in a position, at present, at least, to definitely estimate the abortive power of the 'Woodbridge Treatment.'"

I am my Dear Editor,

Your most obedient servant,

JOHN ELIOT WOODBRIDGE.

Typhoid Fever.

TACOMA, WASH., Sept. 3d, 1897.

Editors Charlotte Medical Journal:

GENTS:—It seems that the wise man spoke truth when he said "there is nothing new under the sun," at least one might think so who has endeavored to keep pace with our profession for the last sixty or seventy years.

Dr. Woodbridge, a distinguished physician of Ohio, firmly believes that he has lately devised a formula of practice by which Typhoid Fever can be aborted in its course, just as we cure other ordinary fevers, and for the last several years he has maintained a controversy in the medical journals that ranks him as Janner ranked among his opponents in the small pox dispute near the close of the last century—a controversy likely to honor him with more than a phenomenal reputation, as he well deserves. But Dr. Woodbridge has failed to give credit to a method of practice in Typhoid Fever seventy years ago, which actually outlined the identical principle on which he proceeds; for it is certainly true that, as far back as 1867, and as late as 1860, the idea of limiting the progress of Typhoid Fever by medical treatment had not been questioned, though that same disease, under other names, had afflicted our race from the beginning of human life. The old writers called it Synochus or Continued Fever, and among the laity it went by the name of Winter Fever. At that period many Colonial physicians were yet in full practice, relying successfully on alterative doses of calomel, combined with Dover's powders, at night, and if one or two grains operated too freely on the bowels, the dose was diminished even down to a one-half or one-fourth grain, if necessary; but some calomel was always given. Of course, adjuvant means were employed to facilitate resolution, such as diluents, fomentations, foot-baths, neutral mixture and the like; and if a case lingered beyond the 14th day, a small blister was established on the inside of each extremity. Patients were strictly confined to fluid diet, as milk, gruel, tapioca, and in the latter stage, when an adynamic condition appeared or was likely to appear, wine whey, wine panada, or chicken broth were given in small quantity every few hours. Sometimes the cases were thoroughly aborted by a general warm bath in addition to that treatment. At least we well remember that this course of practice was almost universally successful in old North Carolina, where some aged doctors may now be living to verify what is here stated.

More than two years ago, when the doctor was in the midst of his discussion with the fraternity, we addressed him a letter alluding to these facts, suggesting the propriety of testing the matter in a few select cases in his practice, omitting all the ingredients in his formula but the small doses of calomel, but we have never heard from him since.

Now, if this communication happens to be seen by the doctor, and he concludes to try the experiment, including the adjuvant remedies, we boldly guarantee success.

Very truly yours,

ROBERT HUNTER DALTON, M. D.

314 N. 11th St.

Nitro-glycerine.

Murrell says that in the case of nitro-glycerine we should aim not so much at giving a certain dose as at producing a certain pharmacological action. In considering this two points must be kept in mind—the idiosyncrasy of the patient and the rapidity with which tolerance can be established. His rule is to begin with 1-600th grain in the case of women and 1-200th grain in the case of men, and to run up this dose until the patient is taking 1 grain three or four times a day. In cases of angina he gives the 1 per cent. solution, and orders the dose to be made up to a drachm with tincture of capsicum, spirit of chloroform, and peppermint-water: the patient for emergency work, carries a small bottle of this in each waistcoat-pocket, as it is found by experience that the drug is absorbed much more rapidly when it is kept warm.

Dr. Charles Minor Blackford, Jr., has resigned the position of Instructor in Normal and Pathological Histology and Bacteriology in the Atlanta (Ga.) Medical College to accept the newly made chair of Pathology in the University of Georgia. The medical department of the University is situated in Augusta.

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n burns of the third degree all the above are useless. Unguentine has healed such where were large open surfaces without a scar, for which at first skin grafting was thought to be he only hope.

WAUGH says: "One cardinal principle should be remembered in treating burns—keep out the air and its accompanying micro-organisms."

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THE

Charlotte Medical Journal.

E. C. REGISTER, M. D. J. C. MONTGOMERY, M. D

Editors and Publishers.

No. 36 South Tryon Street, - - - -

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SUBSCRIPTION, $2-50 PER YEAR,

THE SPITTING NUISANCE AND ITS PREVENTION.

Within the last few months notices have been put up in prominent places in the principle streets of Philadelphia with the legend, "Please do not spit on the Sidewalk." I think this is a step in the right direction. We all know the danger which threatens us in the form of dust so freely distributed in our city streets. The more so if this dust is impregnated with the death dealing bacilli of tuberculosis, diphtheria, &c., so much the more dangerous to the unsuspecting and on this subject uninformed individual. The source of danger of infection is even greater in the street cars and railway carriages than in the streets, and some of the street car companies have also posted signs, prohibiting the spitting on the floors of their cars. Legislature in this respect, which has been suggested in several States will be of little value, as such a law would be hard to enforce, as we cannot place a guardian with every man, woman or child, who walks the streets, to let them see that the law is strictly enforced. Education is the only means at our hands, to carry on this war against this source of infection. A great deal of this can be done by the family physician. He is on intimate terms with all members of the family, and as it would not be policy in every instance to give short orders to his patient not to spit on the floor but in proper receptacles put up for this purpose, he can do a great deal by coaxing, explaining and educating his patient to the results which would follow the continuance of this nuisance. Often have I seen phthisical patients of the poorer classes spending their time sitting alongside of a stove and spitting all around it. Men with their careless habits are much more apt to disregard the comforts of their associates than women with their inborn instinct for neatness and cleanliness. By explaining to such a man the source of danger in which his wife, child or perhaps his parents or sisters and brothers are placed by his careless habits, there will not be one in ten, who will disregard your warning. I believe that a certain amount of a gentleman is inborn in every man and if we find the right way to arouse this gentleman in him and appeal to him we have won half of our battle. Another way of education should be inaugurated in our schools, public as well as private, where the children are instructed in cleanliness and the regards for others welfare. In the lower grades it will not be necessary to instruct them in the action of bacilli, &c., but to impress on their mind that cleanliness is an important adjunct to our welfare and adds much to our health. If our children in the lower grades would be so instructed, we would see less Cigarette smoking and spitting boys on our streets and they in a degree would influence their parents. Especially in phthisical patients the physician should not be satisfied with simply giving a prescription to his patient and instructing him about his diet, but should lay especial stress on the disinfecting and destroying of his expectorations and especially should warn him against spitting in public places on side-walks, street cars, &c. The cities and towns as well as street and steam railway carriages and steam boats should be supplied with proper receptacles which can be easily cleaned and disinfected. It will take years to get the results of such a plan of education but I am convinced that in time this source of infection af last could be overcome.

THREE POINTS IN THE TREATMENT OF TYPHOID.

From various text books on physiology is derived the information that the many beef extracts on the market contain but three per cent. of the nitrogenous matter necessary for nutrition. The fibrin, the portion most desired, is in the process of preparation, coagulated and set aside to be made into what is called "dog cake." The patient pays for a food; but, instead, obtains a substance poor in nutritive quality, but rich in those extractives, xanthin, hypoxanthin, osmazone, &c., whose only effect is that of temporary stimulation. So that in depending upon the beef extracts to furnish nourishment in typhoid, we are really starving our patients. If in the preparation of these substances, the albuminous compounds were acted upon by a digestive agent, and converted into proteids or peptones, the legend on the containers might relate the truth instead of telling of

an imaginative property. These remarks also apply to the various home-made soups and broths and beef-teas, which contain not more available nutrition, and hardly enough saline solution to perform the good offices of a normal intravenous or rectal injection.

It is for good that strychnine is superceding the use of alcohol as a stimulant in the treatment of typhoid; for in its employment is also had its toxic action. The restlessness and sleeplessness so marked in low fevers, is more often a manifestation of exhausted nerve cells, than of morbid irritability. It is, therefore, more rational to administer a strengthening agent, such as strychnine, than a sedative, as bromide. The latter merely masks the condition for a time, while the former corrects it. The use of cold baths in typhoid is beneficial in the writer's opinion, not only because of the antipyretic effect, but also because of the production of a leucocytosis. The increased number of leucocytes, seen after cold applications, would naturally, enable a body to recover more promptly and completely, by throwing into the circulation agents offensive and defensive to germs and their products, for the inventor, if he may be called so, as the Phagocytic theory has proven conclusively that leucocytes not only destroy by taking into themselves and digesting, but that they also kill extracellularly.

SUPERSTITION VS. REASON.

It has been said that the medical profession is responsible for the many fallacies that are so tenaciously held by a certain portion of the laity from the fact that at some time or other the profession has believed and taught these same fallacies. The many superstitions that are daily encountered, nearly all had their origin in a similar manner. The medical profession has made praiseworthy and almost incredible advancement in the immediate past and has come to a point where reason is supposed to rule in place of theory, and the whims and superstitions of former generations must yield to the evidence that effect is the result of cause, and that disease is not the result of chance or necromancy, and the cure of disease is not dependent upon incantations or soothsayings.

It is a duty of the profession to help to educate the people up to a rational understanding of the principles of disease, for the more intelligent the laity, and the better knowledge of the laws of hygiene they possess, and the less of superstition they hold, the more efficient can the physician do his work, and the more perfectly can his directions be executed. It is very unfortunate that there may still occasionally be found a physician who himself either believes, or is willing to have his patients believe, in the mysterious. Such doctors seem to have the idea that it impresses the patient with the belief that he possesses some occult power not possessed by the profession generally. This is beneath the dignity of any physician and unworthy of the approval of any person, and the physician who lends himself to such methods, no matter from what or how many schools he may have graduated, is as veritably a quack as the most pronounced mountabank or empiricist. The days of belief in "demoniacal possession," and "witchcraft," have fortunately passed, but the days when mothers do not consult the phases of the moon to know when to wean her offspring, and when she is willing to allow her child to see his face in a mirror before he is a year old, have unfortunately not yet come.

SURGICAL DRESSINGS.

The matter of dressings for wounds, sores and the incisions in surgical operations has become a question of much importance during these latter years of aseptic surgery. In former times various dressings were believed to have healing properties, *per se*, and with this object in view a variety of medicaments were brought into use. They were applied in the forms of plasters, lotions, ointments and powders, and many of them were beneficial in *a way*, but not in *the way* those who employed them supposed.

It is very well known at the present day that almost the only use of the various remedies that are employed in local dressings is to keep *clean* wounds *aseptic* and to render *foul* sores *antiseptic*. Nature alone can effect the healing. All that any dressing can do is to enable nature to work. Any bland substance that is itself aseptic, and that will protect a wound from the entrance of pathogenic germs is a good dressing. Add to this the quality of being germicide and we have a nearly ideal article. It must be remembered that where we have to deal with a foul sore, or a contused or punctured wound, into which disease germs have gained entrance, we may do much harm by applying any kind of a dressing that will keep the germs pent up within the body. Such cases need to be cleansed as perfectly as possible with antiseptics and then freely drained, but the entrance to the drain should be well guarded by an anti-

septic dressing, lest we defeat our own purpose by allowing micro-organisms to gain admission by means of the drainage tube. No "fast and hard" rules can be laid down as to what is the best dressing to apply in every case, but by keeping the foregoing facts in mind the surgeon can usually select an appropriate one.

DISORDERS OF THE MENOPAUSE.

It is an almost universal belief, or perhaps feeling, would be a better term, among the laity, that the menopause is a period in a woman's life fraught with dangers indefinable, and discomforts vague and inexplicable. This feeling is responsible for a large amount of unnecessary suffering on the part of womankind, in two ways: 1st, The anticipation of some direful disease has an unwholesome effect upon the nervous system, and renders the individual much more susceptible to all kinds of evil influences, and is an especially fruitful predisposing cause for the numerous neurotic manifestations, we are wont to connect, in our minds, with the "change of life." 2d, In very many cases curable diseases are allowed to continue unchecked, until the health is undermined, or the disease becomes incurable, because of the feeling on the part of the patient, the assurance of all her female friends, and too often the acquiescence of the medical adviser in the opinion that "it's her age."

Now, no one who has practiced medicine ten years with his eyes open should have failed to observe that in a vast majority of cases, if there is any serious disturbance of health, either local or general, at the time of the menopause, it is due to pre-existing or co-existing pathological conditions entirely distinct from the menopause, and only coincidently connected with it. It is sad to contemplate how often we are called to see women almost moribund from hemorrhage, or other exhausting conditions, who have been suffering for months, possibly for years, under the mistake that "it's their age."

The following quotation, from a rather recent work on Diseases of Women, is given as an example of the misleading teaching of even our very capable specialists on this question: "There are often some gastro-intestinal disturbances and impaired ultimate nutrition, so that patients suffering in this way complain of indigestion. Such symptoms not only appear during the decline of the menstrual function, but *continue during the post cessation period.*" It seems strange that so brilliant a man as the author of that work had not observed that the *gastro-intestinal derangement* instead of the *menopause* is the cause of their ill health. Had he been a general practitioner with his native capability, he would have noticed that a large share of mankind, without regard to sex, at about that age, that is from forty to fifty, are subject to gastro-intestinal fermentation and consequent auto-intoxication. He also would have come to the conclusion that a large share of the neuroses he ascribes to the menopause is attributable to auto-intoxication, a result of gastro-intestinal disturbance.

As the medical profession of the past have been largely responsible for this false notion regarding the menopause, their successors of the present should endeavor to correct it. Every physician should feel it his professional duty to inform his female clients, who are approaching that age, that there are no diseases peculiar to that event. Thus he may be an apostle of good cheer to the healthy and guardian of safety to those suffering from pathological conditions that need attention.

THE YELLOW FEVER VISITATION.

The advent of this justly dreaded disease in a number of our Southern Cities has given rise to extensive alarm and much disordered commercial relations through quite a number of States in the South-Atlantic Seaboard, has been produced. There has been a number of deaths up to date, but the character of the disease does not appear to be as malignant as a number of previous visitations in the same localities.

In a number of instances there is a want of harmony and co-operation between the State and municipal health authorities, and from this fact no systematic work is being done to prevent the spread of the disease. Some of the restrictions placed are founded on fear rather than legitimate sanitary precautions, while others are foolishly liable in the hazard which they take, with the possible spread of the disease.

In these days of practical sanitary science, with a knowledge of the salient factors operating in the spread of disease of this kind there should not be any lack of resources to cope with the present epidemic. Had the first cases which originated been managed properly, and the avenues for the dissemination of the infected adequately closed there would have been no "epidemic" in a half dozen States to destroy a hundred or more valuable lives. We trust we shall find fresh argument and material in this outbreak of yellow fever for demonstrating the absolute necessity of a Department of

Public Health as a part of the United States Government. One that can act promptly, singly and effectively when an occasion like this one presents itself.

THE TREATMENT OF HAY-FEVER.

At this season of the year we see men weep and we are not able to console them; we sympathise with them and make vain efforts to check the flow of tears. It makes us feel like helpless little children to have persons suffering with hay-fever come to us for relief when we know that our powers are limited and their sufferings are great. We have much to learn about this disease and its treatment. We do know that many bad effects often result from treatment that was intended for its relief. It is for this reason that we mention the subject at this time to remind those who advocate the use of cocaine that a habit is likely to be formed that is far worse in its effects than the opium or alcohol habits, that cocaine anæsthesia in this disease affords great temporary relief we do not deny, but if a condition follows it, as a result of its use, that is worse than hay-fever we should hesitate to apply it. We have local anæsthesia other than cocaine that are safer to use; they are eucaine and guaiacol, both of which possess the anesthetic properties of cocaine and seem not to have the ill effects of the latter on the heart and as yet we have no record of bad habits following their use. Guaiacol is especially applicable to the mucous membranes in the treatment of Hay-fever because it not only relieves the distress by the anæsthetizing the parts, but being a powerful vaso-constrictor allays the congestion. It should be used in from 1 per cent. to 10 per cent. solutions. In oil or alboline the milder solutions to be used with the atomizer and the stronger applied with the applicator.

AN UNUSUAL SUIT.

A merchant has employed lawyers in Asheville, N. C., to institute a suit against Dr. Burroughs, a prominent physician of that city, for the recovery of damages which claimant maintains occurred under the following circumstances:

He was suffering with tuberculosis of the leg, which was treated by amputation by the defendant. The plaintiff alleges that he desired the limb to be buried at once, but the Doctor requested that he be permitted to keep the limb for a short time for investigation. After waiting 12 years, although demands were made upon the Doctor to deliver the limb or bury it as requested, the plaintiff enters suit for the recovery of damages to the amount of five hundred dollars. During this period he claims that he has been subjected to much distress "in mind and body, and great inconvenience and disappointment."

This case is certainly exceptional in character, and if the jury should concede damages to the claimant there is no guessing where suits of a similar nature may end. Large tumors and rare growths may bring very large prices, if not immediately returned to the patient and owner.

VENTRO-SUSPENSION BY THE METHOD OF DR. IRISH.

Kelly's operation for the treatment of retroversion and procidentia uteri was such a marked advance in the surgical treatment of cases not curable by other means, that Kelly should be the patron saint of afflicted womanhood. Not that he has succeeded in convincing all of the profession, but that hardly affects the operation, or does it prevent thousands of women from rising up and calling Dr. Kelly blessed. But it is in the nature of things to keep moving, and there is no fixed point from which we can look and survey a task finished, and it has seemed to the writer of this article that the improvements that Dr. Irish, of Lowell, Mass., has made in the technique of the operation are so radical as to make it practically a new operation.

The difference between the two operations are as follows: Dr. Kelly puts his sutures through the posterior part of the fundus uteri, thus making a forced anteflexion. Dr. Irish puts his through the anterior part of the fundus, and while the uterus is still anteflexed, it is not so markedly so as in the Kelly. Again, Dr. Kelly uses silk for sutures, this is unyielding, and when the uterus is brought up snugly against the anterior abdominal wall increasing the danger of adhesion, thus constituting a bar to the expansion of the uterus in pregnancy. Dr. Irish uses kangaroo tendon, which, being more elastic, permits the uterus to sag enough to obviate this tendency, and which is finally absorbed, something which does not happen to silk. Again, Dr. Kelly uses rather a frail anchorage, including only the peritoneum and sub-peritoneal tissues, while Dr. Irish pushes his needle up through the peritoneum, fascia and abdominal muscles, thus giving a good solid anchorage to his ligatures. This is important, as perhaps the rare failures in the Kelly operation may be due to a giving away of the anchorage.

PROTECTION OF THE STOMACH AND INTESTINES FROM PATHOGENIC GERMS.

A recent writer on this subject gives three means by which can be prevented the infection of the stomach and intestines by pathogenic germs with the resulting fermentation and putrefaction of food and development of inflammatory processes, which, when allowed to go unchecked, end by disastrously undermining the general health. Dismissing the first and second indications, viz., keeping the mouth and neighboring cavities clean, and seeing that food and drink are as free as possible from bacteria, we take up the third: The maintenance of a healthy condition of the defences by which nature always attempts to protect the vital organs from the invasion of hostile germs. A few, only, of the salient points, can be considered here. Indigestible articles of food, as well as an excess of stimulants and condiments (many hygienists would say, all stimulants and condiments,) which irritate and wear out the secreting glands, should be avoided. It is scarcely less important to avoid eating at irregular times, and amounts of food, even wholesome, which are far beyond the needs of the body, or beyond the power of the appropriate organs to digest and assimilate. The abuse of powerful medicines, especially the quack nostrums of the day, so freely prescribed for themselves and friends by many thoughtless persons, are among the most common methods by which the vitality of the stomach is so crippled and impaired that disease germs readily get the upper hand in the battle ever being waged by them with the defensive cells and antiseptic fluids of the body. Dr. Turck, in some experiments, endeavored to infect the stomachs of dogs with certain bacteria, but failed. Then, instruments were introduced into the viscus, and purposely, so manipulated as to produce abrasions of the mucous membrane. Still, the enemy was not suffered to obtain a foot-hold; the abrasions rapidly healed, and the leucocytes, or outwandering cells, abundantly supplied by a healthful circulation of nominally rich blood, promptly put to route the invaders. Not until the gastric mucous membrane had been poisoned by the administration of large and frequently repeated doses of active drugs, was he able to accomplish his object. These experiments teach an object-lesson to the hygienist and one that ought not be lost by the therapist.

One of the advantages, and a most decided one, of cellular therapy is the administration of drugs in small doses, doses insufficient to produce irritation, but sufficient to effect the purposes for which they are given. Even were the size of the dose the only advantage, it must perforce, carry weight. For example, take digitalis. Who does not know the suffering brought on by its use, because of the production of gastric irritation? We cure an evil but to produce another; and who would not rather bear the ills we have than fly to others we know not of? There can be no doubt that cellular therapy is gradually obtaining a hold upon the profession; but it is disheartening to hear a man who has, it might be said, grown up with the profession, make the statement that we make a mistake in giving the solid extracts as they are of too small bulk, and that he prefers the old-fashioned and reliable salts, senna and manna!

FURUNCLES.

Boils are "no new thing under the sun." Tradition and history report mankind as suffering from them in all ages. The books of the Old Testament make frequent mention of them. They have tormented many men besides Pharaoh and Job, yet we seldom find anything said or written on the subject. Many a young man has graduated from a medical college and gone out into the world to practice medicine without ever having heard the subject mentioned. Yet it is one of the commonest ailments as well as one of the most painful, and demands intelligent treatment. Boils are induced by a variety of causes. Bruises, blisters, a depraved condition of the blood, or a generally lowered vitality and various acute diseases are among the causative agents. They have a proneness to occur in crops, but often come singly.

Various means have been employed with the hope of aborting boils, and doubtless these efforts are sometimes successful. Painting with iodine, strapping firmly with adhesive plaster, the application of cold and many other things have been tried. If it is found that suppuration cannot be avoided, it is well to apply warm poultices or fomentations to hasten the process as much as possible. The pain may be mitigated by the local use of anodynes, either alone or in combination with the poultices, until the abscess is ready to be opened. It is always better to lance a boil as soon as it is ready than to wait for nature to open it by "breaking." Do not be afraid to make a free incision. It hurts no more than a small one and admits of thoroughly cleansing with a syringe, and gives free exit to the pus and better subsequent drainage. A good after dressing is composed of equal parts of castor oil and spts. turpentine.

The incision should not be allowed to close till the abscess has healed from the bottom. Constitutional treatment is usually indicated in persons suffering from this malady. Vegetable tonics, iron, calcium, sulphide and arsenic, are among the remedies most frequently employed.

THE AMERICAN MEDICAL COLLEGE PLAGUE.

American humanity of today is afflicted with a plague greater in magnitude and worse in its effects than the Bubone plague in India and all the plagues of Egypt combined. It is peculiar to the medical profession and it effects individuals and forms them into squads or rings for the purpose of self admiration and public notice. It is due to a germ that the scientists of the world have been unable to identify, but clinically speaking we know it as Cephallæ magna or the Big-head. Now this is a *misnoma* and would lead the average student of human nature to believe that those who succumb to this peculiar ailment have a great depth of gray matter in their brains; that their craniums are large and dome like, that their countenances show a marked degree of intellectual lustre; that their actions betray a degree of moral training attained only by long practice and that mentally, they are in every way fitted for the drama they play. And while these symptoms of the disorder are characteristic they are but external and misleading. Let us turn the X Ray upon this paradoxal plague, and more closely examine its true nature. At a glance we recognize a doctor of medicine factory. There is not much else to be seen, except a lot of little wheels which are called professors that have been afflicted by the germ. Here by the aid of culture-media known as the law produce, within this factory, doctors of medicine.

We do not refer to diploma mills where the parchment is procured by mail or messenger, but to the so-called reputable colleges, that play upon the ignorance of dummies they use in the manufacture of doctors, for money, and upon the too confiding public that indirectly suffers from the plague.

If mankind would in any way be benefited by the out-put of these factories we would remain silent. On the contrary we see where the society and world at large suffer from them.

In the first place these factories injure decent institutions by keeping some good people away from them; secondly, they do injustice to the article they turn out, by not giving it a thorough medical education; thirdly, they do much harm to those who employ them; lastly, they are baneful to the profession they must represent.

The public who are unable to judge of the fitness of things depend upon the State to protect them from thieves, contagion and quack doctors. Some States have legislators of sufficient intelligence to make laws protecting the public and profession alike, but the average legislator seems to be either too ignorant or corrupt to do their duty in this respect. If we cannot get State laws that will apply to the plague we should have a National commissioner of health whose duty it should be to look after this and kindred matters and by a system yet to be devised relieve the country of this evil.

We have a department of the National government that takes care of our money and woe to the person that is caught counterfeiting it. Another department of the government looks after the agriculture affairs of the nation. If chinch bugs become a plague and destroy the crops the government hastens to aid the farmers to destroy them. If any of the citizens get into trouble in a foreign land our State department affords him protection and uses other branches of service to enforce its demands. But the way we look after our most vital concern, the lives of our citizens at home, is a shame. We leave our people to the mercy of factory made doctors and trust to providence to preserve them.

It is said that the American people like to be humbugged and we believe it. But there is a limit to all things and let us hope that we will soon discover the nature of the germ and the means of stamping-out this vexatious ailment that infests the American profession and makes work for the undertakers.

THE DUTY OF THE SUBSCRIBER TO THE PUBLISHER.

It is in order to say a few words upon a subject that is of vital importance to us and to every publisher of a medical periodical. There is an old saying, "that money makes the mare go." Now, if we do not have money, we cannot make our journal go. While medical men practice their science for the health of mankind in general, they expect at the same time to make a living by it, if not money, so it is with publishers of medical literature. They disseminate knowledge among the profession, and while they love the profession, they cannot afford to put their time and capital into a business that brings them no financial return. We are not publishing a magazine for our

healths' sake. We wish to get a fair return for our labor. We derive certain profit from advertisements that appear each month, but these are a side issue. We expect our support to come from our subscribers who are the direct beneficiaries of the journal.

We know that many medical men are poor, but we cannot run a business on a charitable basis, and trust to luck to pay our bills. No matter how poor a doctor may be he must, if he expects to keep up with the times, read a good medical journal. He should do this even if he has to let his grocer, butcher and landlord wait. This is a delicate matter that we do not like to discuss, and will not again unless we are forced to. At the same time we are doing only what many other publishers are at present, reminding our delinquent subscribers of their obligation to this fountain of knowledge.

UNIVERSAL STANDARD OF REQUIREMENT THROUGHOUT THE UNITED STATES.

A subject which should interest the Medical profession particularly, and the public as a whole, is the enactment by Congress of laws compelling all candidates for license to practice medicine, to pass examinations of a uniform standard in the several States. The Medical Society of the State of California at its last meeting in San Francisco passed a resolution that Congress be memorialized to pass such laws, and requested her delegates to the American Medical Association meeting at Philadelphia, June 1897, to present the resolution spoken of and ask the A. M. A. Committee on Medical Legislation to bring this matter to the attention of Congress at its next session. The Califarnia Society resolution was presented at the Philadelphia meeting and referred to the proper committee. There can be no question as to the desirability of such uniform laws which would without doubt raise the standard in most of the States, a great gain in itself, and at the same time prevent the least desirable of the yearly out-put of medical graduates from flooding States with low standards or none at all. True, a State with a low standard of requirements has to bear the penalty, but it is manifestly unfair that such a State or territory should be the dumping ground for the whole country, simply because the other parts of the Union have better laws. The standard is none too high in the highest, and the more progressive States should help their less fortunate sisters. The public does not seem to see that it is benefitted most of all, and usually acts as if it was simply an onlooker in a doctor's quarrel. The same spirit protects and fosters quackery. Nevertheless, it is the duty of the medical profession to be true to itself; to struggle along to rase the standard, to make better doctors and protect the best in their rights, whether in one State or another.

The best article on this subject the writer has seen was read by Dr. C. E. Farnum of San Francisco, before the San Francisco County Medical Society in 1896, and he went so far as to ask that the United States Government should supervise examinations to license practitioners of medicine in all the States. There seems to be a question whether Congress has the right to pass such laws, but as Congress governs the States in other matters without clashing with the doctrine of States' Rights, it would seem that national medical examination laws, enforcing a higher uniform standard, with all the benefits to follow such an improved system, could be framed by our national legislative bodies with great advantage to the whole country.

PHTHISIS AMONG THE POOR.

To be poor is bad enough, but to be poor and afflicted with phthisis is still worse. The rich, or well to do man, generally employs a physician when still in the early stages of the disease, and in this case, under judicious treatment, the same can often be arrested; but what of the poor? He or she generally works in a factory, or as a saleslady or salesman in a store, exposed to all changes of climate on going to and coming from work, to the dust of the store and often improper ventilation of the same. They are a hard working, often underpaid and ill-nourished lot, who cannot afford to employ a physician, and in the cities, when ill, have to go to dispensaries and hospitals. Those patients never come until not able to work; as to lay off during working hours means to them a lost or deduction of salary. They get advice free and often the medicine, but food and good proper clothing cannot be supplied from the hospitals. The attending physician in the medical or chest clinics in the hospitals is often confronted with the answer to his advice for rest, good food and possibly a sojourn into the country or mountains, that the family of the patient is dependent on her or his income, and that he or she cannot stop work, telling the doctor to just give him something to fix him up.

Nature has wisely provided that the consumptive is always full of hope and never thinks he is in danger, and will only give

up when incapacitated by extreme emaciation. The writer has under his care at the present time a phthisical lady, age 28, with large cavities in both the upper and lower lobes of the left lung, a pulse of 130 per minute for the last three months, and not able to go across the room without extreme exhaustion, who has to be carried up and down the stairs, but she is planning a trip to a warmer climate, and a few days ago only asked how soon she can go there.

Cases of advanced phthisis, the hospitals refuse to take. If they should die in the same, it would spoil the record of cures in the hospital, and this would never do, as the other hospital across the street has fewer deaths, and therefore claims more cures, and in consequence is doing more good to the community and can claim more State appropriation and private subscriptions, or it may spoil the records of the visiting physician and, therefore, his reputation.

The writer has often seen patients taken to the poorhouse, honest, hard working people, often young, and the only support of an invalid parent, stricken by phthisis and refused admittance to the largely endowed hospitals, with its magnificent buildings, large airy rooms, trained nurses and staff of physicians, simply because they had phthisis.

In a well equipped hospital, with physicians trained in the treatment of the disease, those patients could be made comfortable, the disease often arrested and a life saved, or at least prolonged. Some may say, such people are better off dead than alive, but is it not the physician's first duty to prolong, and, if possible, save life, and for humanity's sake should not the public in general do something substantial for those sufferers. Every day we are urged to give money for the heathens in Africa, which they never get, or to give money for the poor in East India, Russia, or Armenia, but we leave our own poor consumptives to die from want of proper care, food and hospital facilities.

The scientists and specialists hunt the animal and vegetable kingdom for a specific to cure the disease, when we have in good proper food, and an abundance of fresh air, a specific, which no drug can and will ever supply. Would it not be better if part of this time, which those men waste in hunting an imaginary drug or specific, could be employed to interest their rich clientage to donate some money for the establishment of sanatoriums for the treatment of the poor consumptives. There are a large number of such sanatoriums for the rich in existence, most of them bring a large revenue to their promoters, but for the poor there are none, or only a very few in existence.

Only a short time ago the writer received a circular from one of the best known sanatoriums, stating that the price of admission and board, etc., had been reduced so that the poor also can be accommodated. Quickly he hunted for the reduced price and found it to be $20.00 per week. How can a poor workingman or shop-girl afford to pay such a price?

The State should provide sufficient money for the establishment of such institutions, but not under the control of the money grabbing politicians, and charitable inclined people will, when the subject is properly laid before them, give willingly their share for the maintenance of such institutions, and if the patients are able, a small sum could be charged them for drugs or board, so that the same are not made to feel that they are paupers. But, first of all, the physicians themselves must lay aside their hair-splitting differences as to the proper location of such hospitals or sanatoriums, or the State and general public cannot be interested in it.

THE BILL TO PREVENT VIVISECTION.

An obligation which each physician in the United States owes to science and its unhindered development, is to at once interest his or her own Representative in Congress, and the U. S. Senators of that or other States, in the defeat of the Senate Bill 1063, (to Prevent Vivisection in the District of Columbia,) now before the Senate and referred to the Committee on the District of Columbia.

The American Medical Association, at its last annual meeting in Philadelphia, June 2d, 1897, unanimously adopted resolutions protesting against this bill (1063), which were presented to the United States Senate by Senator Cockerell, and filed. It is not enough to pass resolutions in convention, send them to Washington and consider the matter settled. It is necessary to make each member of both legislative branches of the Government understand the sentiment of the medical profession on this question, since physicians are best qualified to decide such matters. The assumption that scientists torture animals and for no good purpose, shows that the opponents of vivisection either have no experience in the matter or very crude ideas, as to the possibility of carrying on such delicate and accurate investigations without anæsthesia and the greatest care to obtain results, such as have been obtained by vivisectionists. The most absurd claim made by these well meaning

but misguided enthusiasts (world reformers on a wrong scent) is that vivisection is *immoral*. Hence we may infer that those who vivisect animals in the cause of science are immoral persons. Dr. Paul Carus, in *open court*, quoted in New York Medical Record of July 24, 1897, makes an excellent rebuttal to the immorality charge, and in fact, puts the shoe on the other foot, and proves very cleverly that the antivivisection movement is immoral. He concludes with these words: "Vivisection, if strictly kept within the limits of its important purpose, is a moral obligation; and he who would hinder the physiologist in the performance of his duties makes himself guilty of immoral conduct; but any cruelty to animals, viz., every lack of respect for life, every thoughtless or wilful infliction of pain, every delight taken in torturing, injuring or destroying sentient beings, is a crime that should be denounced and reprimanded and if necessary checked by the power of the law.

BOOK REVIEWS.

THE EYE AS AN AID IN GENERAL DIAGNOSIS A Hand Book for the use of Students and General Practitioners. By E. H. LINNELL, M. D. Philadelphia: The Edwards & Docker Co. 1897.

There is no question that a work of this kind is greatly in demand. Examination of the eyes affords valuable aid not only in the diagnosis of diseases of the central nervous system, but also of constitutional affections and diseases of other organs. The physician will examine the pulse, take the temperature, number of respirations, but the information furnished by the eye is more frequently over looked and often furnishes the most valuable information. It is a very evident fact that this subject has been too much neglected by the general practitioner. The writer has not enumerated all the eye symptoms which may be associated with the various constitutional and local diseases, but rather emphasize such as are in direct importance in the way of diagnosis and presents such data as will be of ready reference and practical value. The work has been written from the standpoint of the specialist for the student and general practitioner. It embodies the personal experience of the writer during a general practice of twenty years and fifteen years experience in the treatment of ocular diseases. No physician will ever regret the purchase of this work. It is one he needs every day in his practice. It is beautifully printed, well bound, and makes an attractive volume.

A COMPENDIUM OF PRACTICAL MEDICINE, for the use of Students and Practitioners of Medicine. By WILLIS WEBSTER GRUBE, A. M., M. D. Toledo, Ohio: The Hadley Publishing Company. 1897.

This work presents the leading facts and principles of medicine in a brief, clear and concise manner, so that they may be readily comprehended. The work is of an essentially practical character, not too meager in detail, nor overladen with superfluous matter. The author states that in issuing this work that it is not intended to replace the classical works. The discussion of theories has been purposely avoided. The first chapter in the work is devoted to the examination of patients. A great deal of useful information can be gathered from this chapter. The different diseases have all been classified in alphabetical order in large, bold, black type. The causes, symptoms and treatment of diseases are given in very few words. The work makes a volume of over 600 pages, and meets a distinct and imperative need of the medical student and general practitioner. From a mechanical standpoint the volume is first-class in every particular.

THE DISEASES OF WOMEN. A Handbook for Students and Practitioners. By J. BLAND SUTTON, F. R. C. S., Eng., and ARTHUR E. GILES, M. D., B. L. C., Lond., F. R. C. S., Edin. Philadelphia: W. B. Saunders, 925 Walnut St. 1897.

This is a splendid manual upon the subject of which it treats. It contains something over 400 pages, and bears the usual neatness and good make up characteristic of this well-known publisher. This work will be particularly useful to students preparing for examination, and also will enable physicians to practice this important department of surgery with advantage to their patients and with satisfaction to themselves. The work begins with a description of the anatomy of the reproductive organs of women. Following this is treated such diseases coming under this title, such as malformations of reproductive organs of women, diseases of vulva, of the vagina, of the uterus, of the tubes, of the ovaries, &c. The last seventy-five pages of the book is devoted to gynecological operations. All the major operations are described and outlined in detail. This is alone a very interesting and valuable feature of the work. We gladly recommend the work as safe and reliable.

Introduction to the Study of Economics. By Charles Jesse Bullock, Ph. D. Silver, Burdett and Company, New York, Boston, Chicago, 1897.

This work is designed for an introductory text-book of Economic science. The first three chapters familiarize the student with an orderly treatment of some leading facts in the economic history of the United States before the study of the economic theory is commenced. Throughout the book economic principles are discussed with special reference to American conditions, and their workings are illustrated by frequent allusions to American experience. Some of the chapters treat topics that are extremely difficult. In such cases no attempt has been made to secure a false appearance of simplicity. The subject of public finance has been only incidentally touched upon. On practical problems, however, such as bimetalism and monopolies, where weight of opinion is nearly evenly balanced, every effort has been made to present both sides of the controversies.

Pharmacopeia of the American Institute of Homœopathy. Published for the Committee on Pharmacopeia of the American Institute of Homœopathy. Boston: Otis Clapp and Son, Agents, No. 10 Park Square. 1897.

The present pharmacopeia which has been in process for some years is the authoritative, official work on Homœopathic pharmacy. The Pharmacopeia has not endeavored to take a radical departure from established and time honored customs, but to conform these to the present status of chemical and pharmaceutical knowledge and custom.

Part I. General Pharmacy. Under this head is considered the unit of medicinal strength, Mistura, Drug and Medicinal substances, General Treatment of Drugs, Preparations for Drugs, &c.

Part II, is devoted to special Pharmaceutics, the drugs being arranged alphabetically.

Part III, is taken up with select tables for reference, as of weights and measures, the metric system, equivalents, &c.

The volume makes a very handsome book. The mechanical part as well as the literary has been very carefully looked after.

Tuberculosis of the Genito-Urinary Organs, Male and Female. By N. Senn, M. D., PhD., LL.D. Philadelphia: W. B. Saunders, 925 Walnut St. Price, $3.00 net.

Tuberculosis of the male and female genito-urinary organs is such a frequent, distressing and fatal affection, that this special treatise on this subject at the present time appears to fill a gap in medical literature. This work will interest the physician, surgeon and gynecologist equally, as these diseases come under the observation of each. The work is divided into ten sections. Part I. treats of the tuberculosis of the male genital organs. Part II. treats of tuberculosis of the testicle and epididymis. Part III. of the female organs of generation. Part IV., tuberculosis of the vulva. Part V., tuberculosis of the vagina. Part VI., tuberculosis of the uterus. Part VII., tuberculosis of the fallopian tubes. Part VIII., tuberculosis of the ovary. Part IX., tuberculosis of the bladder. Part X., tuberculosis of the kidney. The book is thoroughly modern, and is a safe and sound exposition of the diseases of which it treats. The editing is splendidly done. The book is well printed and well bound.

Clinical Lessons on Nervous Diseases. By S. Weir Mitchell, M. D., LL.D., Edin, Member of the National Academy of Science: Honorary Fellow of the Royal Medico-Chirurgical Society of London. Lea Brothers & Co., Philadelphia and New York. 1897.

This interesting little work is the production of a well known neurologist and contains a great deal in a very small space that is likely to be of much value to the practitioner. The work contains something over 300 pages, and is divided into eighteen chapters, the first of which opens with hysteria. Following this is the chapter on melancholia, this followed immediately by a chapter on some disorders of sleep. This last chapter is one of the most valuable and instructive chapters in the work. The chapter devoted to the treatment of Sciatica is a good one, and one which should be read by every physician. The book is neatly printed, well bound, and contains several illustrations, which are good.

Water and Public Health. The Relative Purity of Waters from Different Sources. By James H. Fuertes, Member of the American Society of Civil Engineers. First Edition. 12mo. Cloth, $1.50. New York: John Wiley & Sons. London: Chapman & Hall. Limited. 1897.

This is a very interesting little volume. It is the grouping together the principal cities of the world into classes according to the quality of their public water supply and then make a comparative study of their mortality statistics. It is a fine discussion of the close connection between drinking water as a cause of typhoid fever. This little book is a useful book and will serve a useful purpose.

LITERARY NOTES.

The September Forum.—The September number of The Forum is the first of a new volume—the twenty-fourth—and evidences the vitality of the magazine. Such articles as "Alaska and the New Gold-Field," "Hawaii and the Changing Front of the World," "Strikes and the Coal-Miners," "Is the Cuban Capable of Self-Government?" can hardly fail to satisfy all readers who wish to keep abreast of the times. The leading article, "A Plea for the Navy," by the Hon. H. A. Herbert, Ex-Secretary of the Navy, follows very appropriately the "Plea for the Army" in the August issue. Mr. Herbert's paper is accompanied by several tables of a most useful character, enabling one, at a glance, to see wherein lies our great naval deficiency. The tables show that on the basis of "total displacement"—sometimes spoken of as "tonnage"—the United States easily occupy the fifth place among the naval Powers of the world. The Ex-Secretary points out that we have over 3,000 miles of seacoast to protect—excluding Alaska,—and that a naval war would be particularly serious for us, because, the United States having refused at the Paris Conference to consent to the abolition of privateering, the right to issue lettere-of-marque and reprisal to private vessels to prey on an enemy's commerce still exists as against us in favor of the other Powers. With regard to Hawaii, the author says we must add largely to our Pacific fleet; otherwise we cannot defend the outpost at a distance of 2,000 miles.

In the World of Art and Letters.—As the result of the development of our public school system and the cheapening of books, there has grown up a large class of men and women who seek broader education, or desire to extend their knowledge along special lines. Their duties in life, or lack of means, exclude them from the universities. The Cosmopolitan Magazine has undertaken the task of bringing liberal education, in its broadest sense, within the reach of those who have the aspiration, but are deprived of the opportunity. Doctor Andrews, late of Brown University, has undertaken the Presidency of The Cosmopolitan's educational movement. The work, thus begun, is not intended to take the place of regular university work, but to supply a gap in existing educational facilities. Those who are really in search of knowledge will find direction and aid. It can do nothing for those who have not the desire to study. An intending student sends to The Cosmopolitan, New York, his name, occupation, previous courses of study, studies desired to be pursued, objects and purpose for which course is designed, and the number of hours, daily or weekly, study which can be given. No charges of any kind will be made to students.

Lippincott's Magazine for October, 1897.—The complete novel in the October issue of Lippincott's, "A Knight of Philadelphia," is a lively tale of adventure during the War of Independence, by Joseph A. Altsheler, who is rapidly making a reputation in this field.

Other stories are "Mrs. Meriwether's Wedding," by Clarinda Pendleton Lamar, and "The Strike at Barton's," by William T. Nichols.

Allan Hendricks exposes some "Political Tricks and Tribulations," whereof he had experience at election times in Indianapolis. His article will make instructive reading for reformers in any American city.

"The Under Side of New Orleans" is described by Frances Albert Doughty. Agnes Carr Sage writes of "The Rise and Fall of Athletic Pastimes," and F. G. De Fontaine of "Historic Animals."

It is not given to every one to witness "A Buzzard's Banquet." Dallas Lore Sharp observed such a feast from a hiding-place, and gives an interesting account of it.

Frederic M. Bird has some remarks on "Bad Story-telling." "Some Literary Shrines of Manhattan" are unveiled by Theodore F. Wolfe, who in this first of a series of pilgrimages visits those "In Oldest New York."

The poetry of the number is by Clarence Urmy, Charles G. D. Roberts, and Grace F. Pennypacker.

Before and during the war in Greece no writer was so frequently quoted on the crisis as Henry Norman, of the London *Chronicle*. The October number of Scribner's Magazine contains Mr. Norman's inside history of the diplomacy that preceded the war, now told for the first time. He was in confidential relations with the Greek government, and his narrative is therefore of authorative value. A visit to the front on the eve of battle is also picturesquely described. The illustrations are from Mr. Norman's own photographs, among them autographed potraits of the King and his sons.

The American Monthly Review of Reviews for October has several articles of unusual interest to woman readers. Miss Frances Willard tells the story of the World's W. C. T. U. movement; Mrs. Ellen M. Henrotin, president of the General Federation of Women's Clubs, outlines the benefits of those organizations; Mrs. Sheldon Amos, of England, writes of a London Women's Club, and Miss Mary Taylor Blauvelt contributes an enlightening article on the opportunities for women at the English universities.

The Choice of a Mercurial Treatment.

Fournier in the Lancet gives rules for administering mercury in different cases of syphilis. Leaving aside the fumigation, baths, mercurial plasters, etc., as antiquated, there remain three possible methods: (1) Ingestion; (2) inunction; (3) hypodermic injections. The advantages of ingestion are: (*a*) Simplicity; (*b*) it being usually well tolerated by the mouth and intestinal tract; (*c*) its proved activity. The disadvantages are: (*a*) It may upset the digestion; (*b*) it is only tolerated in moderate doses, otherwise diarrhœa and stomatitis appear; (*c*) it is therefore only suitable where a moderately active and not very rapid method is indicated. The advantages of inunction are: (*a*) It is intensely active; (*b*) it does not, unless exceptionally, upset the digestion; (*c*) it leaves one free to give any other medicine by the stomach. The disadvantages are: (*a*) The trouble and time required are such that few patients will carry it out properly; (*b*) the course cannot be kept secret; (*c*) its curative effects are very unequal, probably depending on the way it is performed; (*d*) it is more likely than any other method to produce stomatitis of a very severe character. As regards hypodermic injections, there are two methods—namely, frequent or daily injections and occasional injections. The advantages of the former are: (*a*) it is an active method, whose activity can be regulated from day to day; (*b*) it does not upset digestion; (*c*) the stomach is free from other medicines. Its disadvantages are: (*a*) The possibility of local complications and the severe pain; (*b*) the impossibility of carrying it out properly outside a hospital. Occasional injections are remarkably active, and sometimes work extraordinary cures not seen in any other treatment —such as the disappearance in a few days of large tuberculous syphilides, tertiary glossitis, gummatous laryngitis, etc. Of the disadvantages, some, such as stomatitis, are common to other methods; some, such as the almost inevitable injection nodules, are not of much importance; and some, such as phlegmonous inflammation, can be avoided by antisepsis. The great and unavoidable disadvantage is the pain. The author found that even a small dose, such as $\frac{1}{150}$th of a grain of calomel, is often extremely painful. Of 400 calomel injections the pain was bearable in two-fifths, intense in three-fifths, and in one-fifth of the latter intolerable. Many have therefore given up the treatment altogether. This is wrong, as it is very valuable in exceptional cases where a rapid effect is important or which do not yield to other treatment. Such cases are iritis and other ocular affections, ulcerated tuberculous syphilides, spreading gummatous ulcerations, phagedenic chancres, gummatous laryngitis, etc. Exfoliative glossitis also often yields to no other treatment. From the above summary certain indications are evident. (1) As regards the patient himself: if robust, ingestion will probably be most suitable, but if dyspeptic or cachectic this must be avoided; if his dentition is bad the best treatment is the perchloride by the mouth, inunction and occasional injections of large doses being then altogether contra-indicated. Injections are not to be used unless really necessary in workmen and others who live by the use of their limbs. (2) As regards the kind of syphilis: it may be roughly said that ordinary cases should be treated by ingestion, more severe by inunction, and the worst by injections. (3) As regards the object of the treatment: if it is for any partibular symptom the course most suited for it must be chosen; if it is to cure the disease the first consideration is that the course must be a long one. Hence, owing to the disadvantages of inunctions and injections, ingestion is by far the best for this purpose, the course being interrupted now and then, but lasting for years.

How do Climatic Influences Prevent the Propagation of Phthisis?

Dr. Gardiner in the Boston Medical and Surgical Journal insists that the impression that phthisis is not communicated in the arid or elevated regions of the world is not at all proved by the statistics generally brought forward. The immunising power apparently possessed by a climate may be really due to the manner of life, such as isolation and the like, day and night in the open air, or to the selection of lives, as the early settlers are necessarily strong. It is therefore only after a country has been set-

tled for some time that indoor industries, overcrowding, and the general insanitary surroundings of civilisation exert their full action. Such conditions, however, now exist, as the dry and elevated regions of almost the entire world have populous cities, whose inhabitants lead indoor lives comparable to those of the dwellers in the crowded civilised centres from which our statistics have for years been drawn. The statistics of these cities clearly show that the prevailing opinion as to the influence of climate is well founded. For example, Denver has a population of 150,000, tall buildings which shut out the light, industrial occupations which are conducive to phthisis, and a large proportion of phthisical invalids scattered amongst its inhabitants. Yet only 64 deaths from non-imported phthisis occurred in 1896. The average city would show 450. Again, circular letters were sent to medical mem practising in the dry belt which comprises Utah, Arizona, Wyoming, New Mexico, and Colorado, asking the number of cases seen or heard of by them and the number of years each had been in practice; 203 years of observation in practice gave only 130 cases of non-imported phthisis, fully 80 per cent. of which were from Salt Lake City, in native Mexicans in New Mexico, or in an altitude below 3000 ft. The writer attributes the climatic influence to the loss of virulence of the tubercle bacilli when distributed in the form of dust, from exposure to the constant sunshine in the rarified air, and also to the increased depth of respiration which high altitudes produce.

The Suturing of Wounds.

At the recent meeting of the British Medical Association at Montreal, Dr. Marcy stated that, notwithstanding the revolution in surgical procedures, in a large minority of operation wounds made in healthy structures suppurative processes were still to be met with to some extent. The surgical technique was complete for the making of a wound aseptic, but the difficulty was in maintaining it in this condition. He asserted that the cause of this was definite—viz., an open wound. The remedy was to be stated with equal emphasis—hermetically close the wound and seal at the time of operation without drainage. He discussed at length the drainage-tube, its purpose, danger, and in aseptic wounds its worse than uselessness, and referred to the micrococcus pyogenes albus as being in his opinion the most common cause of wounds under abundant antiseptic protective dressings taking on infection when drainage was used, and as being also the cause of stitch abscesses, and the most usual source of infection coming from the surgeon's own hands. Careful disinfection of the hands was of much greater value to the patient than a marble hall for an operation amphitheatre. Dr. Marcy discussed the varieties of suture material and made the deduction that all aseptic wounds should be closed by absorbable sutures under the most careful aseptic conditions. He recommended that sub-cuticular sutures should be used for the coaptation of the skin. The wound should then be dried and sealed with iodoform collodion reinforced by a few fibres of absorbent cotton. He condemned catgut, not so much for the difficulty of sterilisation, as for its inherent defects, a large share of its strength resulting from being twisted and kept dry, When wet, as it must continue to be in these tissues, it was elastic, unreliable in knotting, and untrustworthy. Before twisting and drying it was a very thin, flat band of connective tissue, the fibres of which crossed obliquely for the physiological purpose of accommodating the intestinal contents, and was not unlike a very delicate silk fabric cut diagonally, The advantages to be obtained from the use of connective tissue as a suture material were apparent, not alone because it was absorbable, but because, as Dr. Marcy demonstrated by repeated experimental studies upon animals, it was first surrounded by leucocytes which, little by little, invaded the suture. As the process of absorption went on, these cells were changed into connective tissue corpuscles, and, as a consequence, the suture material was more or less completely replaced by a living band of connective tissue, this of course in many instances proving to be an advantage of the first importance. At first he used the tendons from the buffalo, moose, and caribou. Such tendons had been used from time immemorial by the North American Indians, for the sewing of robes. Dr. Marcy, as the result of systematic and extended observations, ascertained that the tendons taken from the tail of the kangaroo were greatly to be preferred, since they were smooth, even in any variety of size, had never been subjected to decomposition, and were much less difficult of sterilisation, while in strength they exceeded in equal weight that even of silver wire. When properly chromicised they held in the tissues for about three months. They were now so generally used and well known that only reference to them was required, Coaptation and fixation at rest, with as little force as possible, of like structures was the object sought. Suture

material more than required to secure this purpose was detrimental. It must be applied with a minimum of devitatlization of the tissues. The interrupted suture was faulty in that it held at only the single joints of insertion, and in order to coaptate the structures in large wounds undue compression, often to devitalization of the part constricted, had to be used. Each stitch required a knot, which was slow of absorption. Like structures, as far as possible, should be joined, fascia to fascia, muscle to muscle, &c, When coaptation had been accurate there was no pockets left for the undue retention of fluids, and as a consequence no drainage-tube was required. Dr. Marcy much preferred the full-curved Hagedorn needles, since they penetrated the tissues with care and accuracy and might generally be used without the intervention of forceps. The continuous suture required but a single knot, and undue constriction was less liable, since a compensation occurred equalising the force applied to the entire suture. As a rule fatty structures should not be sutured, since necrosis is not seldom a resultant. The over and over (glover's) stitch was faulty in that it constricted the tissues unduly. Dr. Marcy applied the suture deeply from side to side, the needle being introduced parallel to the long axis of the wound, and he therefore called it the "parallel suture." The needle was inserted exactly opposite the emergence of the preceeding stitch and, when drawn upon, it would be noted that the surfaces were evenly coaptated, and that the suture was deeply implanted in healthy tissues, crossing the wounded edges at right angles. The sub-cuticular suture was effected in precisely the same manner and the wound sealed. An aseptic wound thus closed with buried aseptic tendon sutures would remain aseptic, and in well vitalised structures was followed by primary union. No expensive and troublesome dressings were required. The subsequent nursing and care were very greatly diminished. The anxious foreboding of the surgeon lest "something should go wrong with the wound" was avoided. No stitches were to be removed, reducing greatly the dread and anxiety of many patients. Safety was greatly enhanced and the period of convalescence shortened. When the work had been done with care the resultant cicatrix was often scarcely visible—a matter of much importance in some parts of the body. Some operations hitherto impossible had been rendered feasible by the use of the buried absorbable suture—e.g., the restoration of the obliquity of the inguinal canal in the male upon which was dependent the cure of hernia. Indeed, it was for the cure of hernia that Dr. Marcy first used buried animal sutures in 1870. He recently reported to the American Medical Association that he was in his four hundredth series of hernia operations, with over 90 per cent. of resultant cures. In laparotomy the closure of the abdominal wound was greatly strengthened by the use of aseptic absorbable sutures. It was estimated that 10 per cent. of laparotomies, where the wound was closed by a single line of deep interrupted sutures, were followed by hernia. Dr. Marcy reported more than 500 cases of aseptic laparotomies in his practice with but a single resultant hernia. In concluding he urgently recommended that every surgeon should familiarise himself with the method of wound closure by means of buried absorable sutures, preferably tendon, predicting that these would soon be generally adopted, and that they would hold first place in the technique of modern treatment of wounds.

The Effect of Diet upon Epilepsy.

Haig believes that the uric acid fluctuation is the cause of the fits. By a carefully selected dietary he has found that the intake and formation of uric acid can be so reduced that the fluctuation shall never, or only very rarely, be sufficient to affect the blood-pressure and the intracranial circulation to a serious extent. The epileptic wave of excretion runs very high, but only for a short time, and it is very difficult to keep the general level of uric acid excretion so low that these waves shall not occasionally get high enough to do damage by raising the blood-pressure, and affecting the intracranial circulation. Here flesh food must be avoided entirely, and all soup and meat extracts regarded as poisonous; while tea, coffee, and cocoa, and all other vegetable substances containing xanthine compounds, are to be regarded as producing uric acid, and used, if at all, only as the merest flavouring. From the facts mentioned it is pretty clearly shown that the fits of epilepsy, and convulsions in general, have an extremely close relationship to the uric acid headache, and, like this, are probably functional disorders due to altered circulation in the brain, this, again, being due to the contracted arterioles and high blood-pressure caused by uric acid. Since this headache is controlled with almost absolute certainty by a diet which frees the blood from the excess of uric acid, it is hoped that it will be found that fits will in many cases yield in the same way to well-directed treatment.

Toxins and Antitoxins: A New Theory.

Calmette and Delarde have reinvestigated the natural and acquired antitoxic properties of blood serum from various animals, taking the reaction to doses of abrin as the most frequent criterion. They have arrived at the following conclusions: (1) The serum of animals naturally refractory to such toxins as they have investigated rarely possesses antitoxic properties with regard to those toxins. Thus, while fowls and tortoises resist very considerable doses of abrin their serum is totally inactive with regard to abrin. Similarly, Vaillard has proved that the fowl, although refractory to tetanus, gives a serum which is without action on tetanotoxin. Even when the serum of refractory animals is antitoxic, as in the case of the ichneumon and the hedgehog with respect to serpents' venom, the antitoxic power is always extremely feeble, and by no means in proportion to the degree of immunity. There is thus no relation between the natural refractory condition of certain animals and the antitoxic power of their serums in respect of the toxins by which they are unaffected. (2) While warm blooded refactory animals can produce antitoxins under the influence of repeated non-fatal injections of toxins, cold-blooded refactory animals produce none under the same conditions. (3) Cold-blooded refactory animals, such as the frog, can acquire immunity against fatal doses of toxin without their serum becoming antitoxic. (4) Antiabric and antivenomous serums can be used practically for the production of passive immunity in man and animals, and also for the diagnosis of the toxins which they oppose. The former has a very marked preventive action when applied to mucous surfaces, and hence may be turned to account in ophthalmology. (5) The active substance of antitoxic serums is not modified by certain chemical reagents, which destroy or profoundly alter the toxins. It does not alter toxins when mixed with them *in vitro*. It appears to exist in great abundance in the leucocytic protoplasm of vaccinated animals, the leucocytes retaining their antitoxic powers after being thrice washed free from serum. It does not dialyse through membranes; it acts as energetically on the leucocytes of fresh animals as do the antimicrobic serum. (6) Certain substances having no specific action on toxins, such as bouillon, normal ox serum, or the serums of certain animals vaccinated against various infections or intoxications can, when injected into fresh animals, act preventively as regards other infections or intoxications. Hence immunity, natural or acquired, cannot be due to the presence in the serum of a chemical substance having the power of destroying or modifying the toxins. The true existence of a preventive substance in the serum of vaccinated animals remains yet to be proved; the authors' experiments suggest that the preventive power may after all be a physical and not a chemical phenomenon. Thus they have shown that the antitoxic function is independent of immunity, since the latter can exist in the absence of the former; further, that both natural and acquired immunity result from a special property of the cells. These, according to the conditions of the surrounding mediums and their own composition, yield passively to the influence of the toxins as a bar of soft iron does to that of a magnet. When these conditions change under diverse external influences, such as the tolerance of certain poisons, the functional state of the cells is modified at the same time. This may be compared to the conversion of the soft iron into steel by tempering; the steel can preserve its magnetisation, and transmit it temporarily to other bars of soft iron or permanently to other bars of steel. The authors maintain that a similar physical explanation can be offered of the susceptibility or temporary permanent resistance of organisms to infections and intoxications.

A Book of 100 Years Ago.

In the course of one's reading, an old book is often pulled out from the shelf whose pages, though printed a 100 years ago, have a singular fitness with the present. It was so with an old copy of a report of the College of Physicians of Philadelphia, upon "The Facts and Observations Relative to the Nature and Origin of the Pestilential Fever," which prevailed in this city in 1793, 1797 and 1798.

This little book has for its object the prevention of the spread of this Yellow Fever which we are to-day confronting at New Orleans. The points discussed in this little book are the mode of transmission, the symptoms, and whether it invariably first appears in seaboard towns. The discussion on these points are of much interest. To quote: " * * * From the sloop was landed a chest of clothes, which belonged to a seaman who died with fever in Martinica, which chest was opened and the contents inventoried by Mr. Austin in his store in presence of Capt. Freemau, of Henry Hubbard and of Polly Gorham, a niece of Isaac Gorham. Mr. Austin and his clerk were seized a few days after opening of the chest. If Mr. Austin and his clerk received the seeds of the disease from the clothing,

* * * the forces of the disease must have been the fœtid effluvia of dirty clothes which had been a long time close packed in a chest in a sultry climate."

Letters were received from physicians all over the country by the college touching upon well established points to-day. Was it contageous? Could it be carried from country to country by traders, etc.?

Every one handing in a report on the epidemic was required to swear to his statements before a magistrate or alderman.

When, on the other hand, one picks up a modern journal and reads that Sanarelli announces the successful isolation of the bacillus of Yellow Fever, and that this same observer is engaged in sero-therapy with the bacillus, the contrast is striking between to-day and 100 years ago. The discussion no longer is upon gross matters, the symptoms, the contagiousness, the value of the quarantine, but is the bacillus icteroides of Sternbery the same as the bacillus of Sanarelli?

If this report of the College is within reach of any reader of this retrospect he will do well to look into it. A most interesting half hour can be spent in reading how the well established facts of our text books are worked out from circumstantial evidence, and how the quarantine came to be an essential of our seaboard towns.

C. N. B. Camac.

Baltimore, Md.

The Treatment of Fracture of the Patella with Continuous Extension and without Confinement to Bed.

Bryant in the Medical Record describes the following method of treating recent fractures of the patella, which he has found satisfactory in 13 cases. The plan is presented, the author says, not as a substitute for operative measures, but as an adjunct to them, as the patient can with this appliance be about without special danger or discomfort after wiring, etc.

A plaster-of-Paris cast is applied to the leg, beginning at the bases of the toes and extending up to and partly embracing the lower fragment of the patella, and allowed to dry. An ordinary Buck's extension is next applied to the thigh. The adhesive plaster extends from the perineum to the upper border of the upper fragment and terminates in a loop at either side of the limb a little below the knee. After the plaster has become firmly adherent gentle traction is made by attaching elastic cords, which pass under the sole of the foot to the loops on either side of the knee, and a plaster-of-Paris cast is applied to the thigh, reaching from the upper limit of the adhesive plaster down to the upper fragment, where the plaster is so fashioned and padded as to hold it as nearly as possible contact with its fellow. Any posterior support or splint is then applied and secured with a plaster-of-Paris bandage. The final step consists in drawing together the fragments of the patella as firmly as possible, either with adhesive strips obliquely applied or by means of a knee-cap suitably constructed.

After the apparatus is comfortably in position the patient is permitted to walk about with the aid of crutches, the limb being kept in an advanced position however, by a sling carried beneath the sole of the foot and around the neck of the patient.

Injuries of Parturition; the Old and the New.

At the Montreal meeting of the British Medical Association, Dr. Sinclair read an address in which he gave the history of the progress in obstetrics during the past two hundred years. He compared the methods of the Sixteenth Century, as practiced by Chamberlain and Mauriceau, with the methods in vogue at the present time. Midwifery, he claimed, has become to-day too largely surgical, and the gynecology of today is largely required because of too frequent interference on the part of the obstetrician. Childbed morbidity is due mainly to the use of forceps. He quoted Collins' assertion that instruments should not be employed more than six times in 4,000 cases. During the second period of the history of obstetrics, from the time of the introduction of anesthesia until the adoption of antiseptic methods, important advances were made. Emmet's operation and the work of Marion Sims in the cure of vesicovaginal fistulæ belong here. The dangers of anesthesia are uterine inertia and the tendency to the too early use of forceps, with resultant perineal and vaginal laceration. The third period of anesthesia and antiseptic methods combined, began in 1870–73. The danger here is again due to too frequent and too early interference. The student of today learns surgery, which he never practices, and practices midwifery, which he never learns. During the last four years there has arisen a strong revulsion to the use of the forceps in Germany, and statistics show now that they are employed there only in about 1.03 per cent. of labor cases. In conclusion, he emphatically urged more careful instruction in obstetrics in the medical colleges.

Neuroses due to Meteorological Conditions.

A neuroses due to atmospherical conditions, says Dr. Lowenfeld, in the London Lancet, may be observed either isolated or associated with other nervous diseases. It attacks both men and women, although the author has met with it more frequently in the latter. No age, except infancy, is exempt.

In a category of cases the hereditary conditions exercise a decided influence. A general febrile disease has often been found to be the starting point. Lowenfield has had no occasion to observe the ætiological influence of nutritive anomalies; however, among old people it is especially those who live well who are attacked. Also, it is not yet known what the meteorological factors are which most affect neuroses. More frequently it is the change of weather which exercises this influence, and, generally, the passing from a favorable to an unfavorable period, which is indicated, moreover, by a combination of several meteorological conditions, notably of the hygrometric and the electrical conditions and of the quantity of ozone in the air.

The author divides the troubles which are observed in these forms of neuroses into two groups: 1. Symptoms of excitation, pain, and paræsthesia. 2. A condition of motor weakness. The pain is often of a very marked lancinating character. It may be limited to certain parts of the body, or it may vary in its location. The intensity is very variable. The attacks usually last twenty-four hours, sometimes only a shorter time; in some cases the pain has been known to last several days.

Paræsthesia is much rarer than pain, and manifests itself in the form of extreme weariness, rigidity, and numbness in the limbs. Regarding motor troubles, so far the author has been able to make out a condition of weakness only in the arms.

The prognosis of neuroses of atmospheric origin is not unfavorable in young persons or in persons of middle age without hereditary tendencies. If a pronounced hereditary defect exists, recovery can scarcely be counted upon. In cases in which the pain is confined to the legs the onset of tabes may be suspected. The duration, however, of the malaise, and sometimes the fact of a previous infection, will throw a light on the diagnosis. In any case the diagnosis, from this point of view, says the author, should be conservative if it concerns a young subject, but at an advanced age, at sixty years, tabes can scarcely be taken into consideration, in spite of the rather frequent excruciating pains in the limbs.

The treatment consists first in strengthening the nervous system, of which the susceptibility to change of temperature and weather should be combated. If the pains are localized, local treatment should be employed, such as massage and electricity. When the attacks are grave anodynes should be resorted to, especially in old persons.

A Case of Hemiplegia Following Diphtheria.

Levi, in the Journal of Laryngology, reports a case of a child, six years old, who suffered from a severe attack of "gangrenous diphtheria," during which she developed an endocarditis acuta, otitis suppurativa, abscess in neck, paralysis of palate, pupil, etc. Towards mid-day, 17th March, sudden apoplectic seizure, with consecutive left-sided paresis of face, upper and lower limbs. After a few hours the paresis gradually disappeared, leaving only a slight weakness of the parts involved. 19th of March; second apoplectiform seizure, more violent than the first—the same parts paralyzed as last time, but the paralysis was more marked and did not pass off. In the next few days the facial paralysis gradually diminished, but that of the limbs remained unchanged, 28th March; acute increase of the paralysis, involving the muscles of trunk and neck. At this time the patient had two independent groups of paralysis. On the one hand was paralysis of pupil, palate, trunk, and neck; on the other, the paralysis of the face and limbs. Sensation and reflexes specially weak on the affected side. Gradually the paralysis of the trunk, then that of limbs, passed off, leaving only a slight degree of weakness and stiffness in the left arm.

Bacteriological examination of the membranes from throat and nose revealed Loeffler's bacillus in great numbers; also strepto- and staphylococci, and some larger cocci in groups. Threads of lepto thrix and decomposition bacteria were also present.

Dr. Levi has found records of only thirty-four cases of diphtheritic hemiplegia; so that the disease is certainly to be regarded as a great rarity, specially when contrasted with the great commonness of other forms of paralysis following diphiheria—*e. g.*, paralysis of palate, of eye muscles, and even of groups of muscles in the limbs.

The question arises, wherein does diphtheritic hemiplegia differ from ordinary hemiplegias on the one hand, and from the commoner forms of diphtheritic paralysis on the other?

It seems fairly well decided that ordinary diphtheritic paralysis is a peripheral paraly-

sis, and that any changes found in the cells of the cord are to be regarded as the result of an ascending neuritis, but not as a poliomyelitis.

In the cases of diphtheritic hemiplegia, however, the causes of the paralysis are found to be those common to ordinary hemiplegias in the adult. Thus, of the thirty-four cases recorded, seven were ascribed to hæmorrhage, fourteen to embolism; in the remaining thirteen the diagnosis is not quite clear, In the six cases which were examined *post mortem*, one was due to hæmorrhage and five to embolism.

The Treatment of Wounds of the Air Passages.

Platt records in the British Medical Journal thirty-five cases of suicidal wounds of the throat. The air passages were injured in ten cases, and in the remaining twenty-five cases the wound was comparatively superficial. The position of the wound was as follows: In one case above the hyoid bone; in three cases in the thyro-hyoid membrane; in three cases in the crico-thyroid membrane; in one case through the trachea; in one case through the thyroid cartillage and crico-thyroid membrane (two wounds); in one case through the trachea and crico-thyroid membrane (two wounds).

After carefully watching these cases, and the results of the treatment, Dr. Platt has arrived at the following conclusions:

1. Suicidal wounds of the throat should be treated by primary suture in all cases where the general condition of the patient permits.

2. Antiseptic precautions are most important.

3. If necessary, chloroform should be administered, and is perfectly safe.

4. Divided muscles should be sutured, and in bringing together the edges of the skin the inversion caused by the platysma muscle should be corrected.

5. The wound in the air passage should be completely closed.

6. In many cases it is quite safe to dispense with the use of a tracheotomy tube. If a tube be deemed necessary, it should not be introduced through the suicidal wound in the air passage, but through a fresh vertical cut at a lower level.

7. Silk is the best material for suturing the larynx or trachea.

8. During the after treatment it is necessary, except in certain special cases, to feed by a tube or by the rectum.

9. If the above methods of treatment be adopted, not only will a very large proportion of even dangerous and extensive wounds of the air passages recover, but the period of recovery will be greatly shortened, the patient will not be exposed to the same risks of secondary inflammatory complications, and he will be much less liable to the occurrence of permanent stenosis of the trachea, or the formation of an aerial fistula.

Emotional Dyspepsia.

Rosenbach discusses (Edinburgh Medical Journal) the prognosis is more favorable in this than in any other nervous dyspepsia if the patient has not become hypochondriacal owing to the long duration of the ailment, or owing to a neurotic predisposition. It is unfavourable when he broods over it, suspecting some severe organic disease, but even here it is not hopeless. It is important to investigate the digestive processes, as the proof that the food stuffs are really digested almost always makes a favourable impression on the patient. It is better here not to give a test meal, but to withdraw a portion of the stomach contents after the midday meal, for the patient is often at his worst in the morning. Treatment is particularly successful when a single emotion has been the cause of the dyspepsia; the success of treatment is interfered with by successive shocks. The demands made upon the stomach should be diminished as much as possible after any emotional shock, but a total absence from food is undesirable, unless there is a loathing for it. A certain amount of occupation, walking exercise, and light muscular gymnastics is in most instances to be recommended, but both mental and bodily fatigue are to be avoided. Drinking warm water, and warm applications to the epigastrium are employed to counteract symptoms of colic and spasms. Cold food, etc., should be avoided. The author says that small doses of narcotic and sedative remedies, such as opium and belladonna, are useful when given not on a full stomach. Even a small quantity of cognac is recommended under these circumstances. When digestion is considerably prolonged, washing out the stomach is serviceable, or when that is not practicable pepsin and hydrochloric acid may be given. Sodium bicarbonate can be given in sour eructations, but this remedy can easily be abused. The modern method of over-feeding is never employed by the author in this affection, even if there is wasting. In cases of marked hyperæsthesia of the stomach cocaine may be given with good results. Treatment directed to the mental condition is often more efficient than the use of the prepared food stuffs so popular at present. Prophy-

laxis is not to be overlooked, and here the author again recommends the use of small doses of opium, belladonna, or cognac, etc. Some interval should be allowed to elapse after the emotional shock before much food is taken.

The Progress and Results of Pathological Work.

This was the subject of a paper presented to the Montreal meeting of the British Medical Association by Dr. W. W. Cheyne of London. He said, "one is naturally tempted to look back on the history of pathology during the last sixty years, but I hope that you will not expect me to follow the fashion in this respect. To trace the history of pathology during the last sixty years would be to follow the science practically from its commencement and to go back to a state of matters which it is almost impossible for us now to realise. To-day it is the etiological side of pathology, so to speak, which occupies our attention, and deservedly so, for, so far as practical results in the treatment of disease are concerned, the knowledge of the changes produced is of comparatively minor importance as compared with that of the reason why they are set up and how they take place. The more accurately we can trace the etiological factors in disease and the subsequent course of events the more likely are we to arrive at a rational method of treatment. The most striking and important advance has been the growth of the great science of bacteriology, a science which has not only led to most important practical results, but has also thrown a flood of light on the processes which go on in the body as a whole and has stimulated research in other directions not immediately associated with it. It is difficult for those who have only taken up the subject of bacteriology comparatively recently to realise the absolute blank which it presented even twenty years ago. When I became house-surgeon to Lord Lister in 1876 objections of all kinds were urged against the theory on which Cisterism was based; some denying the existence of bacteria at all, others maintaining the theory of spontaneous generation; some asserting that organisms were always present in the healthy tissues, others denying that they had anything to do with disease, or that the success of the antiseptic principle depended in any way on the exclusion of micro-organisms from wounds. A great advance which followed soon afterwards was the remarkable research by Lord Lister on the bacterium lactis, in which he devised a method of separating bacteria by fractional cultivation, which resulted in the separation of the bacterium which causes lactic fermentation from other organisms. Then came Koch's work on infective diseases of wounds and Metchnikoff's work on phagocytosis, a theory which is not only very fascinating in itself, but which has proved a most suggestive working hypothesis leading to many of the researches which have given bacteriology its present position. In spite, however, of all that has been done many problems still remain unsolved. In the case of tuberculosis, why is it that in one part of the body we have a slow growing lupus disease and in another part, perhaps, of the body a rapidly developing tuberculosis? The same problem is apparently presented with regard to the bacilli of diphtheria, in that we may have in one case a true diphtheria, in another a membranous rhinitis, while in a third, although the bacilli are present in the throat, the individual may be apparently healthy. Another very remarkable problem is presented by the results which follow free incisions into tuberculous tissue, An incision is made into the abdominal cavity, masses of tuberculous tissue and tubercle are found scattered over the peritoneum, nothing whatever is done, the wound is stitched up, and yet in many cases the patient, who up to that time has been going steadily down hill, begins to pick up, and the disease may come entirely to a standstill. In connexion with the pyogenic organisms also we have many problems. How is it, for example, that after an abscess is opened antiseptically suppuration at once ceases? If instead of opening the abscess antiseptically a poultice be applied, suppuration goes on and may be very profuse. But if it be opened at a time when there is free fluctuation and when it is beginning to point, and if the necessary antiseptic precautions be taken and proper drainage provided, no more pus forms, and yet when the abscess is opened it is found to contain living pyogenic organisms. We can easily understand that the subsidence of the fever and general disturbance is due to diminished absorption of toxic products. But why do not these living pyogenic organisms keep up the suppuration? And why is it that after two or three days one may fail to obtain any cultivations from the serum which escapes from the wound? A very remarkable thing in connexion with these advances, especially in experimental pathology, is the enormous direct practical benefit which has already resulted to the human race; and it is sufficient answer to the antivivisectionists who oppose the use of intelligence and observation and experi-

ment to point to the saving of human life and the relief of suffering which has taken place in the last few years. Since Pasteur's experiments on spontaneous generations were published, only thirty-six years have elapsed, and during that time remarkable results have been attained in treatment as the result of experimental pathology. The practical results already obtained affect diagnosis, prophylaxis, and treatment. The diagnosis of many parasitic diseases has now been rendered certain and easy by searching for the causal organisms, and I need only instance such diseases as diphtheria, tuberculosis, malaria, anthrax, gonorrhœa, &c. The greatest of all the advances, because so wide-reaching, has been in the prophylaxis of disease, especially in the prevention of septic disease after operations, as brought about by the discoveries of Lord Lister. By these discoveries the occurrence of sepsis in wounds made through unbroken skin is prevented, and the chances of general sepsis in septic wounds are much diminished, and numerous lives are saved, not only in this way, but also by the fact that the Listerian treatment permits the performance of many life-saving operations which could not otherwise be attempted. In other cases, also, prophylaxis is of great value, as in diphtheria and in Pasteur's treatment of rabies, which may properly be grouped as a prophylactic rather than a curative treatment. Lastly, I may refer to advances in the cure of disease. In the case of diphtheria there can be no question that the antitoxin is a most potent curative agent, and that, used in the early stages, it is almost certain to cut short the disease. As regards tetanus, the evidence in the case of animals is absolutely convincing, but in patients suffering from the disease the effect is not certain, probably because we have to do with an acute illness which runs its course before the serum has had time to act. The same may also be the case with the antistreptococcic serum, although I have great doubts of its value as a curative agent. In other instances, such as plague and snake-bite, we may apparently look forward to a cure; while researches are being carried on with regard to pneumonia which may lead to valuable results; nor must I forget to mention Pasteur's system of inoculating cattle against anthrax. What are we to say about the new tuberculin? We all know how careful an observer Koch is, and the fact that he looks on it as a valuable remedy is to my mind sufficient to make it necessary to give it a careful and hopeful trial. I must say that I have always been favourably inclined to the old tuberculin, and have regarded it in relation to phthisis like iodide of potassium in relation to syphilis, and, had I been a physician, I do not think I should have abandoned it in the hurried manner in which it was thrown aside. I might enumerate many other instances of direct benefit from pathological research, such as the advances in the treatment of tuberculous diseases of bone and joints as the result of better knowledge of the nature and distribution of the disease, the treatment of appendicitis, and the investigations on peritonitis and diseases of the appendix, the more complete operations for cancer following fuller study of the mode of spread of the disease, and so on; but I have said enough to show the great importance and value af pathological research. Such results must encourage us to go on working with all our might and without ceasing, bearing in mind that many are suffering and dying every day who might be saved if only we had just a little more knowledge of the workings of the body and the processes of disease."

Reflex Epilepsy.

Dr. W. J. Harris reports in the Lancet, Aug. 28, 1897, several instructive cases that properly comes under this heading. He says:

Epileptic fits associated reflexly with some cause such as irritation of a scar, a diseased eyeball, or disease of the nasal mucous membrane, have occasionally been met with. That is, such cases have developed as epileptogenous zone, analogous to Brown-Séquard's guinea pigs rendered epileptic by hemisection of the spinal cord, and in some cases removal of the peripheral source of irritation has been followed by cessation of the fits. Dr. Hughlings Jackson is of opinion that every patient subject to fits has an epileptogenous zone, that in every epileptic patient there is a "discharging lesion" somewhere in the brain, and that disturbance of the part of the periphery (cutaneous, visceral, &c.,) most especially represented in this discharging lesion may provoke a fit. Sir W. Gowers, on the other hand, states: "It is excessively rare for cutaneous irritation to excite a fit. Epileptogenic zones, analogous to those of Brown-Séquard's guinea pigs are practically unknown." Two cases have hitherto been recorded of epileptic fits following a touch on the head—one by Dr. James Dunsmure in 1874, and one by Dr. Hughling Jackson in 1887. Both these cases were in boys, and in each there was partial hemiplegia, more marked after the attacks. In the older case there was slight right hemipiegia,

with temporary right-sided paralysis after the attacks. In Dr. Jackson's case the weakness was left-sided. In both fits were producible during sleep, and also touching any part of the head in either case, if the patient were unaware that he was going to be touched, produced a sudden fall or fit lasting a few seconds. Dr. Dunsmure's case was watched for eighteen years, the falls becoming less frequent after the onset of severe epileptic fits, and improvement was marked during the administration of bromides, as in Dr. Jackson's patient. In each case the attack began at the age of two and a half years, but the attacks, being so short in duration, momentary falls only, loss of consciousness during them could only be surmised, though it was probable. Through the kindness of Dr. Jackson I am enabled to give the details of another somewhat similar case which was under his care at the National Hospital for the Paralysed and Epileptic recently, though in this case there were never any unilateral symptons or hemiplegia, nor were any fits ever produced during sleep.

A girl, aged five and a half years, was admitted to the National Hospital for the Paralysed and Epileptic on Nov. 10th, 1896. She was a seven-month's child, the labour having been natural, and no instruments used. The father was stated to have suffered from syphilis before his marriage. There were three other younger children, all healthy, with no history of epilepsy in the family. The patient had not had chorea, rheumatism, or scarlet fever. When three years old she had a series of convulsions during one morning, but had no further attacks until nine months previous to admission. One month before this attack she had a fall, striking the back of her head, and she was dazed for some time afterwards, though whether the fall was due to a fit could not be ascertained for certain. A month later she began to fall about especially in the morning, and at first always fell on the back of her head, though later she always fell forwards. Her parents said that the fits were always slight and momentary; her eyes turned up and the face sometimes twitched and she suddenly fell down, often striking her head or biting her lip. She had these attacks sometimes once only, sometimes a dozen during the day. After she had suffered from them for between two and three months her mother noticed that the fits were induced touching her on the head, as by putting the hand on her forehead, or when smoothing back her hair, or in putting on her hat. If she was expecting a touch, no fit followed. On the day of her admission the nurse, in going to her to take off her hat, accidentally touched her head, and the child immediately fell forwards, the father remarking that that was what frequently happened. The same day, when her left cheek was suddenly touched without her expecting it she immediately fell forward, her eyes rolled up, and she foamed at the mouth, there being definite transient loss of consciousness, followed by crying. There was no weakness of any limb nor any sign of hemiplegia, and at no time were there any one-sided symptoms, as in both the previously recorded cases. The knee-jerks were normal and there was no affection of sensation. The eyes were normal and there was no affection of any cranial nerve. She was a quick, nervous child, but of uncertain temper, and her intelligence was probably below the normal. She was under observation in the hospital until March 7th of this year, and during her four months' stay she had numerous fits, only occasionally a day passing without one, though she was taking six grains of bromide of potassium three times daily during the whole time. All the fits except two were of nearly the same character, often occurring when she was sitting up in bed, and she would fall with some violence against the iron bedrail, giving herself a black eye, or sometimes biting her lower lip, and generally crying afterwards, even if not hurt. The nurse noticed several fits induced by smoothing back her hair, and after her admission three sudden fits, momentary falls, followed by crying, were produced during the first month by suddenly tapping her on the head without her knowing the touch was coming. Touching her during her sleep never produced a fit or any sudden change or colour or alteration in respiration, as in the two cases referred to above. During the latter half of her stay in hospital no fit could be induced by sudden touches, the child seeming to become accustomed to the not infrequent testing, and the spontaneous fits were also slightly less numerous. Only two severs fits were seen, with general convulsions and cyanosis, one a fortnight after admission, and another ten weeks later. It is noteworthy that about this time the reflex fits produced by sudden touches ceased; and in Dr. Dunsmure's patient it was noticed that the sudden falls became less numerous when ordinary epileptic fits supervened.

Habitual Constipation.

Dr. Ewald, in the Edinburgh Medical Journal, says that there is a form of habitual constipation in which there is either a diminished irritability of the intestinal ner-

ves or defective development in the muscular coat of the intestine. An hereditary factor is often present. Constipation may be acquired through the habit of suppressing the desire. Unsuitable diet is frequently the cause. An abundant diet difficult to digest, deficient in water, or too easily absorbed, or of insufficient variety, may lead to constipation. Sedentary habits are also a cause, but obstinate habitual constipation may occur even in those who lead an active life. Disturbances in the circulation, as in heart disease, mechanical pressure, and particularly pregnancy, may produce it. Displacement of the bowel, such as occurs in Glénard's disease, is of doubtful influence. Adhesion of coils of intestine together, or to some other organ, is an occasional cause. The symptoms are general and local. The relation of constipation to mental disturbance is well known. The theory of intestinal intoxication, although not absolutely proved, cannot, in the author's opinion, be set aside. In the diagnosis mechanical obstruction must be carefully excluded. The prognosis as regards recovery from habitual constipation is doubtful. Under treatment the author says that as few purgatives as possible should be used. The various methods of treatment are (1) dietetic, (2) physico-mechanical, and (3) medicinal. (1) Such foods should be employed as are known to increase peristalsis. (2) Suitable massage is of the greatest value in many cases, but it sometimes fails, and the same may be said of electricity. The usual position taken up in defecation is not the best adapted for emptying the rectum. Under the head of "clysters" the author draws attention particularly to the anal part of the syringe. It should be made of vulcanized caoutchouc, and about 30 to 40 cm. long. The disadvantage of clysters is that ultimately small quantities of water do not suffice, and then large amounts must be used. The large intestine may thus become overdistended and the injections useless. Regular attempts at defecation with slight pressure should be made. (3) The author discusses the various medicinal agents under mild and more powerful purgatives. An efficient rhubarb preparation is very useful, but it may become necessary for the patient to have constant recourse to it. The author mentions two cases in which rhubarb was taken for twenty and thirty years respectively. Calomel is especially useful in children. Castor oil is not suited for constant use. Aloes belongs to the stronger purgatives. In a few cases, with a certain diagnosis of fæcal tumor, the author obtained the best results by the use of croton oil with castor oil. He refers to saline purgatives and mineral waters of German spas. Large injections of olive oil may very properly be recommended. Sometimes sedative and antispasmodic remedies are required where constipation is of the spastic type.

The Influences that have Determined the Progress of Medicine During the Past Two and a Half Centuries.

Dr. Steven Mackenzie of London (British Medical Association, Sept. 3, 1897), stated that these influences were varied, the first place in point of time and one of great importance being yielded to anatomy. Of any one influence, however, that has helped the advance of scientific study and the progrees of medicine, probably the increasing perfection of the microscope has been the greatest. With each new development of this instrument a greater range has been given to our researches,and, with the assistance of chemistry, it is continuing to reveal to us fresh facts that have created new branches of science. The thermometer, again, has been of invaluable aid in the study of diseases, allowing us to measure and record the degree of fever, and to watch its progress with such a degree of accuracy as to furnish us with evidence of the greatest value in the diagnosis, prognosis, and treatment of disease. Electricity, by the laborious and complete investigations of Dubois-Reymond, has revealed to us the mode of action of nerve and muscle, that would have been impossible to obtain in any other way. Though the hopes at first entertained of its value in the treatment of diseases have not been altogether fulfilled, it is still of much service in this respect, and perhaps still more valuable as an aid in diagnosis. The ophthalmoscope, introduced by Helmholtz, has enabled us to understand diseases of the interior of the eye, which without its assistance was impossible. It has allowed the exact examination of refraction, and has revealed changes in the termination of the optic nerve, in the retina, and choroid, not only valuable in themselves, but so important in the light they throw on pathological changes occurring in the nervous system and in the body generally that the use of this instrument has become a necessity of practical medicine. The laryngoscope, perfected by Czermak, has given precision not otherwise attainable to the diagnosis and treatment of diseases of the throat, and has important bearings on general medicine in the recognition of paralysis of the muscles that move the vocal cords, in eneurism, and in disease of the

central nervous system. The sphygmograph, the cardiograph, the arteriometer, and, the latest invention of this class, the sphygmometer, have enabled us to ascertain the exact condition of the circulatory system, and are of the greatest service not only in studying the problems of normal and abnormal physiology, but in the recognition of disease and its tendencies and in the influence of remedies. Nothing from the time of Harvey gave such an impetus to the study of exact medicine as the introduction or discovery of auscultation by Laennec in 1816; and, indeed, Harvey's great discoqery had little practical application in clinical medicine until its introduction. Auenbrugger had introduced percussion in 1761. Laennec had adopted it, and his discovery of auscultation, with his zeal as a morbid anatomist, enabled him to work out most of the great problems of diseases of the thorax. The knowledge thus begun has, by the labors of many workers, increased in range and accuracy down to the present time, and the diagnosis of diseases of the chest has reached a degree of precision unequalled in any other department of practical medicine. We are now able not only to recognize disease of each of the valves of the heart, but to estimate its degree and the influence of the lesion on the greater and lesser circulations, and to trace the course and effects of emboli carried along the blood stream. Our knowledge of diseases of the lungs is nearly as complete as that of the circulatory system. The speaker reviewed the progress that had been reached in clinical medicine, dwelling especially on fevers, renal diseases, diseases of the nervous system, Addison's disease, and myxœdema.

Clinical Classifications of Nephritis.

Dr. Brault at the twelfth International Congress held at Moscow, Aug. 25, 1897, said:

The attempts at classification of nephritis have been numerous. The first were due to the labors of Bright and of Rayer, but for anything like a satisfactory classification we must come down to our own day, when the pathology of the kidney, like that of other organs, has been completely changed by the studies and discoveries in general pathological histology. The name of Virchow marks the beginning of this last period. The speaker did not wish to say that only good came from this revolution, for there is even some question as to whether the pathology of the kidneys has really benefited from the application of these ideas. It was in order, the speaker said, to inquire of what use is a clinical classification, and whether it is more rational and practical than are others. The most used of the histological classifications divided nephritis into parenchymatous (Virchow, 1852) and interstitial (Beer, 1859). The discovery of the connective tissue in the kidney and its importance in disease led Traube to reject completely the parenchymatous nephritis of Virchow. Kelsch, following in his footsteps, declared that inflammation could develop only in connective tissue. The improvements in the microscope soon cleared up the question, and almost all microscopists accepted as exact this simple division of parenchymatous and interstitial nephritis. Nevertheless certain authors still refused to admit the existence of a parenchymatous nephritis, maintaining that interstitial nephritis alone was capable of causing atrophy of the organ. Carrying this idea to extremes, forgetting that the kidney is formed after the type of a gland, they affirmed that its epithelium could degenerate but could not become inflamed; that, finally, all the processes of nephritis being essentially interstitial, acute inflammation of the kidney is an acute interstitial nephritis. They showed as an example of this the nephritis of scarlet fever. So we see at this period, from a histological point of view, everything was confusion; as for pathological, physiology and etiology, they were of so little importance that they are scarcely mentioned. In 1875 Bartholow described an acute and chronic parenchymatous nephritis, and an interstitial nephritis or induration of the cellular tissue of the kidneys (under which he comprehended simple atrophy, cirrhosis, sclerosis, and granular atrophy). At the same time Lancereaux substituted for interstitial nephritis the term primary diffuse nephritis, and for parenchymatous nephritis epithelial nephritis. Shortly after this Charcot called attention to the identity of pharenchymatous nephritis and large white kidney, nnd of interstitial nephritis and small contracted kidney.

Following this came the studies of Klebs and Bamberger, who declared the division into large white kidney and small contracted kidney wrong, because they found microscopically in each form lesions affecting both the parenchyma and connective tissue. Weigert (1879), Cohnheim (1880), and Wagner (1882) said that the epithelial lesions always precede the alterations in the connective tissue, and they declared (especially Weigert) that if the lesions varied in different cases it was only a difference of degree. Cornil and Ranvier had already expressed this opinion in 1876.

The most natural classification, Dr. Brault

said, would be an etiological one. In 1884 the speaker, working with Cornil, wrote a thesis on diffuse and systemic nephritis, and in 1893 he discussed again the division of nephritis. At that time he contended that there was no longer a question of the unity or duality of Bright's disease. If the diseased kidneys vary in their size, their consistence, their form, their coloration, their granulations, etc., all these elements depend on whether the process is rapid or slow, violent or slight. Infectious diseases irritate, inflame, destroy *en masse;* chronic diseases, the dyscrasias, and prolonged intoxications destroy the organ by a series of local inflammations or cause it to degenerate little by little.

A clinical classification is possible only as regards duration; as transitory, acute, subacute (or prolonged), and chronic nephritis, this last comprehending only the latent varieties, namely, those with serious lesions but appearing healthy. A symptomatic classification such as Weigert and Wagner have proposed, of nephritis with or without œdema, nephritis with or without hemorrhage, is not practicable, for allowing such a nomenclature the question of classification still remains.

In all cases of nephritis in which the duration is prolonged we see constantly hypertrophy of the heart. It is therefore useless in the understanding of a nephritis to have recourse to the old divisions of parenchymatous and interstitial, for, if we have (1) the cause of the nephritis and (2) the date of its appearance, we possess sufficient data to explain what has already taken place, to foresee the future course, and to deduct the oorresponding anatomical form.

Disinfection by Vapor of Phenols.

Dr. J. M. Johnson, in the British Medical Journal, narrates certain experiments he has made to ascertain the values of the vapors of the carbolic acid group as germicides. "No. 5 carbolic" is said by the makers to consist almost entirely of cresylic acid, there being but a small percentage of phenol present. Dr. Johnson found that the vapor of 12 ounces acting for sixteen hours in a room of 1,500 cubic feet capacity did not kill staphylococcus, bacillus coli communis, anthrax spores, or the bacillus of cholera. There was only inhibitory action. The bacillus of typhoid was the only one killed. The vapor of izal he found too heavy for disinfecting purposes in this way. In the "strength of 8 ounces to 1,500 cubic feet there is not sufficient penetration to even inhibit growth." The vapor deposits on glass as a fine film. When 12 ounces of cresol (commercially pure) were evaporated in a room of 1,500 cubic feet the vapor was generally sufficient to destroy a six days' growth of the bacillus coli communis, the cholera bacillus, and a five days' agar culture of typhoid, but sporing anthrax on silk threads grew more abundantly than the control. Absolute phenol vapor had an advantage over izal or "No. 5" in its greater diffusibility and penetrating power. It even killed germs of such resistance as staphylococci and streptococci when wrapped in an envelope of filter paper. It killed other microbes exposed to the vapor, with four failures out of thirty-three pieces of inoculated material employed. In three of the four the failure was evidently due to an accident of position. Dr. Johnson considers "that the vapor of absolute phenol in a strength of 0.64 per cent. is a reliable germicide for the majority of these microbes when exposed to its action in an ordinary room for sixteen hours," but recommends a working strength of 1 per cent., that is, the evaporation of 12 ounces for every 1,000 cubic feet.

What Ought Midwives to be Taught?

Dr. Herman states that the duties of a midwife are to attend a patient during and after a normal labor. She must understand antisepsis. She must know the causes of hemorrhage and how to control them. She must be able to recognize malpresentations and pelvic disproportion. She must also understand the normal forces of labor and learn to recognize a variation in them. She must take precautions against ophthalmia and be able, if necessary, to resuscitate a child. Her knowledge must also include the early symptoms of disease in young infants. A thorough acquaintance with the normal puerperal state should be included in her equipment and she must be able to diagnosticate puerperal disease. The amount of knowledge which the midwife is thus expected to have is certainly far in excess of that possessed by many. She must, however, be looked upon as an evil which cannot be wholly avoided. She is dangerous because she is rarely able to recognize the first symptoms of a serious complication and such are so sudden in obstetric practice that the life of mother or child may be lost before she can summon one competent to deal with the emergency. While it is desirable, if midwives must exist, that they be as intelligent as possible, it is certainly far better to extend the outpatient work of maternity hospitals with graduate instruction, so that the field for the midwife can be limited as much as possible.

Alcoholism and the Penal Law.

At the last quarterly meeting of the Society for the Study of Inebriety an interesting review of the penal law in relation to alcoholism in Europe and the United States was given by Dr. J. J. Pitcairn, Deputy Medical Officer of H.M. Prisons Holloway and Newgate. His paper, says The Practitioner, is published in the *Proceedings* of the Society for August. Inebriety is now generally regarded on the Continent as a mental disease requiring compulsory seclusion. In France there are not at present any asylums for the treatment of inebriates, but the question has latterly been forced upon public attention, and a proposal has been made to treat inebriety in ordinary lunatic asylums on the ground of its being a form of mental disease fairly amenable to therapeutic measures. In Germany, until 1891, jurists looked upon the legislative suppression of drunkenness as impracticable. In that year, however, the Congress of German Jurists recommended the establishment of compulsory asylums. The oldest asylum for inebriates in Europe is that at Lintorf, in Rhenish Prussia, which was founded as long ago as 1851. It receives every year an average of seventeen patients who are employed in agriculture. The cures are estimated at 25 per cent., a proportion which would probably be increased if the patients could be detained until a permanent cure has been effected. In Austria a law has recently been enacted providing for the compulsory detention of drunkards in special asylums for an average term of two years. The sentence of incarceration will be pronounced by the usual legal tribunal. Voluntary inmates are to be received on condition of their agreeing to the rules which apply to convicted patients. In Hungary, Belgium, Spain, Portugal, Greece, Denmark, and Russia there are no inebriate asylums. In Italy an abortive attempt to establish an institution of the kind at Milan was made in 1886 In Holland there is one at Hooghullen. In Switzerland a compulsory asylum for inebriates was established by the canton of St. Gall in 1890, the period of detention being from nine to eighteen months, and the Communal Council being the committing authority on medical evidence being furnished of the necessity of detention. There are in other parts of Switzerland, six private asylums for inebriates, four for men and two for women. They are all organised as agricultural colonies. In Sweden the "Gothenburg system" prevails; the prevention of drunkenness is aimed at by severe restriction of the sale of spirits. In Norway the "Gothenburg system" also exists, but there are two private establishments for the cure of drunkenness, and an amended code is now under consideration which will legalise asylums for the compulsory seclusion of inebriates. In most of the United States the habitual drunkard may be detained for an average period of two years in one or other of the numerous inebriate asylums. "Prohibition" has also been adopted in seven States: Main, Vermont, New Hampshire, Iowa, Kansas, and North and South Dakota. "Local option" exists in about half the rest of the States. The experience of the Americans with regard to prohibitive legislation as to alcoholism has, on the whole, been unfavourable. In Norway, also, where on paper the system of prevention seems to be as perfect as could be desired, secret drinking is very rife, and, according to Dr. Pitcairn, the working-classes, unable to gratify their passion for alcohol in the ordinary way, are large consummers ether, naphtha, and even spirit-varnish.

Celluloid Bandages.

Landerer and Kirsch have experimented with celluloid as a substitute for plaster-of-Paris in bandages. The weight of such a bandage is less than one-fourth that of a plaster-of-Paris one and less than half that of one stiffened with water-glass. It is said to be not very expensive. According to the authors, a jacket costs in Germany about five marks ($1.25), which is no real objection to its use when one considers that, if well made, it will last for months, and presents the further advantage of a smooth surface, readily cleaned, and is impervious to urine and other discharges.

Its application is as follows:

The sheet celluloid is cut into small pieces and dissolved in a close-stopped bottle in acetone, enough of the fluid being used to rise four times as high in the bottle as the celluloid. This solution of celluloid is rubbed into each layer of the gauze or crinoline bandage or jacket, an ordinary kid glove being worn for the purpose, as the celluloid otherwise dries on the skin, and can only be washed off by acetone. For a jacket at least ten layers are necessary; for a bandage from four to six layers, according to the strength required. The outer layer is smeared with a coating of the celluloid, which forms, when dry, a highly polished surface. It takes three or four hours for a celluloid bandage to dry. That is considerably longer than is the case if plaster-of-Paris is used. In order to permit of ventilation, small holes may be punctured in the jacket wherever necessary.

The Mechanism of Inversion of the Uterus.

Professor Hector Treub presented a paper with this title at the British Gynecological Society, July 8, 1897. (British Medical Journal). He related a case of inversion of the uterus in a patient who had been pregnant three times. Each pregnancy had ended in abortion, and the last abortion was seven years ago. For some time she had observed that something was protruding in the vulva, but she could always reduce it easily. Eleven weeks ago a prolapse appeared suddenly, and could not be reduced. This caused much pain, and brought about hæmorrhage to the extent of making her swoon. Her general health had deteriorated; she had lost meat-juice like fluid, and had been feverish. On examination a total inversion of the uterus, including the cervix, was found. Hysterectomy was performed, and the patient made a good recovery. Besides the œdematous mucous membrane, the uterus only showed a very small intramural fibroid near the fundus. Microscopical examination showed that the muscular tissue was in a normal condition, and that there was no question of atrophy of the uterine wall. The author went on to discuss the views held as to the mechanism of inversion. In only one group of cases was this wholly understood, namely, in those following immediately after labour. The two elements upon which, according to Gaillard Thomas, the inversion depended, were there present—namely, (1) relaxation and inertia of the uterine walls, (2) downward traction or pressure. In other cases the explanation was less obvious. The theories of Kustner and of Schauta and Gottschalk were insufficient, and Professor Treub submitted the following theory: The base of a sessile tumour cannot contract because of the implantation of the tumour, which diminishes or altogether abolishes the contractility of that part of the wall. And it cannot be that only the contractility of that base is diminished; the surrounding parts must necessarily be feebler within a greater or smaller circumference. If from the outset the tumour was intramural, the smaller degree of resistance of that part of the uterine wall, coupled with intra-abdominal pressure, may occasionally bring about a slight beginning of inversion; and, when this is the case, the conditions are essentially the same for sessile and intramural tumours and for the partial inversion described by Rokitansky. A circle of uterine tissue is abruptly curved in the place where Rokitansky found the external indentation. In that incurved circle the uterine muscle must be absolutely paralysed; and this paralysis, again, will not be confined to a linear circle, but, gradually diminishing, will extend over a greater or lesser surface. The contractions of the normal part of the uterine wall will try to expel the part of the wall that acts as a foreign body. These expulsive effects may slightly increase the inversion as far as the paralysis surrounding the circle of inversion permits, thus displacing the circle itself and paralysing another part of the uterine wall. Necessarily the extension of the partial paralysis proceeds farther in the uterine wall, too, and by the repeated action of this muscular play the inversion may gradually become complete as regards the body of the uterus. As soon as the body is inverted there is no longer any excitement for uterine contraction, and the inversion of the cervix generally does not take place; and it is the intra-abdominal pressure, again, that may invert the cervix too.

Guaiacol as a Local Anesthetic in Minor Operations in the Nose and Throat.

Dr. J. E. Newcomb (American Laryngological Association, May 6, 1897) stated that while cocaine answers in a general way the demands of an ideal local anesthetic, its use is not always free from unpleasant consequences. At times even alarming results follow. Various substitutes have been proposed. Of these latter those which have come into greatest favor have been tropococaine and eucaine. Latest reports of even these show that they are not entirely free from danger. Two years ago Lucas-Championnière suggested that guaiacol might be used for this purpose. The first definite application of the remedy in laryngology was made by Laurens. He employed a five-per-cent solution in olive oil freed from its albuminoids, resinous and coloring matters by means of dried sulphate of zinc, and from its free fatty acids by absolute alcohol. With the oil thus purified, guaiacol makes a clear, limpid solution. It may be employed as is cocaine in spray, by swabbing or on tampons.

Laurens's experience may be summarized as follows: In the ear, a few drops of the warmed solution can be instilled after previous cleansing, and in from fifteen to twenty minutes removed with hydrophile gauze. Sufficient anesthesia is thereby induced to enable paracentesis to be done in a painless manner. Similarly, furuncles of the meatus may be incised in the nose, after the usual tamponing or spraying, cauterization of the turbinates can be done without discomfort, polyps and polypoid tissue re-

moved with the cold snare, and even the hot wire can be similarly employed. The tissues do not retract as with cocaine, so that guaiacol will never be its equal where we wish to systematically examine the nose, or in case of suspected neurosis make out the possible existence of sensitive areas. In the pharynx guaiacol may cause decided reflex movements, and yet sufficient anesthesia may be induced to cauterize granulations and enlarged tonsils.

Geronzi repeated with success the work of Laurens. He dissolved the guaiacol in alcohol, thereby making the remedy easier to handle while not modifying its anesthetic power. In the ear, he was able to puncture the drum, remove granulations therefrom, remove aural polyps and also the malleus, the anesthesia being perfect.

Dr. Newcomb has given the remedy a trial in 36 cases. It was used in spray, on tampons, by application and by the hypodermic needle. The operations done included removal of polyps and polypoid tissue with the cold snare, curetting of the ethmoid cells, sawing off of septal spurs, cauterization of tubinates and of enlarged tonsils, curetting the pharyngeal vault, etc. As regards anesthesia, it was perfect in 14, partial in 16, slight in two and absent in four. No more bleeding in the cutting operations was noticed than with cocaine, though guaiacol is said not to contract the tissues.

In the cases thus far reported, numbering 98 in all, no constitutional effect has been noticed. In order to obtain satisfactory anesthesia at least fifteen minutes must be allowed for complete absorption.

The Variations in Weight of Infants During the First Two Weeks of Life.

O. Schaeffer (Edinburgh Medical Journal) obtained the following results from weighing 592 healthy children at full term on the seventh and fourteenth day after birth:

1. Only fourteen and one-half per cent. of the children had regained their first weight or exceeded it on the seventh day, and continued to increase up to the fourteenth day.

2. Forty-one per cent. regained or exceeded their post-partum weight only on the fourteenth day.

3. Forty-four and one-half per cent. remain below their initial weight on the fourteenth day; six per cent. only had once slightly exceeded the initial weight during this time.

4. The minimum weight occurred on the third day; the initial weight was regained on an average on the ninth or tenth day; the maximum weight was reached on the tenth to twelfth day.

5. The less the propensity to an increase in weight the more irregular was the limit for the occurrence of the minimum, (a number of times even at the fourteenth day), and of the maximum weight.

6. Boys presented less variations in the increase or decrease in weight than girls.

7. Those who at birth were notably above the medium weight, especially girls, showed a greater tendency to decrease in weight.

8. Influence of the mother: Primipara, under twenty years of age, gave birth on an average to lighter children, having the least predisposition to increase in weight. So also did sickly and hard-working mothers, receiving insufficient food. Vice-versa, childreu of primipara and pluipara, between twenty and twenty-nine years of age, were found to be most favored as regards increase in weight. These women also gave birth to more boys. The rapid recovery from child-bed of the mother did not exert any influence on the weight of the child.

9. The advantage of robust fathers in favor of the weight of the child was usually offset by debility of the mother. Race, people, and branch of family will exert their influence.

10. The actual loss in weight up to the seventh day was less than the difference in weight between the milk injected and the excrements (including respiration and perspiration). Difference on the third day, 184.5 grammes; on the seventh day, 315.6 grammes; nevertheless, the oxidation of the milk compared with that of all excrements from the beginning represented an excess, (12171 to 265877.5 calories daily, increasing from the first to the fourteenth day). This excess, which goes hand in hand with decrease of bodily weight, served for the production of heat. For the transmutation of the poikilo-thermous fetus into a homoio-thermous infant as rapid burning up of the childish organism takes place in the first few days.

11. Consequently, there was a parellelism of the curves of weight, temperature and of the general excretion.

Vertigo and Ocular Defects.

Wm. Osler (Medicine) discusses the relation of vertigo and ocular defects. The most satisfactory explanation of the occurrence of ocular symptoms in severe labyrinthine vertigo he thinks is given by Gowers, who says: "Ocular symptoms, secondary in origin, are present in some instances.

In cases of ear disease an incraase of pressure within the ear, as by pressing firmly the antitragus over the opening of the meatus, may cause nystagmus. During paroxysms of vertigo the patient may be conscious of a jerky movement of objects, a quick motion in one direction and slow return, like that sometimes produced by nystagmus. and I have known it to correspond with intermitting tinnitus. This apparent movement may sometimes alone be caused by pressure on the meatus, and nystagmus may be produced, with vertigo, by disease of the middle ear, of course through the secondary affection of the labyrinth. It has been known to persist after the ear disease was cured, even for ten years. I have several times known double vision to occur duriug or after a paroxysm; in one case of pure aural vertigo each attack was followed by double vision, jerky movement of objects, and distinct erroneous projection in the direction of the movement, so that if the patient attempted to touch an object the hand went too far in that direction. Slight diplopia is sometimes due to nystagmus that is not quite equal in the two eyes. It is apt to cause an error in diagnosis."

Gowers does not refer to the relation of refractive errors and vertigo.

Osler reports a case of severe vertigo of eighteen months' duration relieved by the correction of a marked hypermetropia with astigmatism.

Diet During Courses of Mineral Waters.

Dr. F. P. Weber (Treatment) says that C. von Noorden, Karl Grude, and many others have pointed out that the true rules of diet to be observed whilst undergoing a course of mineral water are the rules suitable to the individual constitution of the patient and the complaint from which he is suffering. Amongst articles of diet which were supposed to be especially unsuitable at Carlsbad butter and fats were the most noteworthy because they are such extremely important foods. The mineral water was supposed to prevent their proper digestion and assimilation. Not only was fat prohibited with sulphated alkaline waters, such as that of Carlsbad, but with muriated waters, such as those of Kissingen and Homburg. Recently, however, F. Kraus has shown experimentally that a course of sulphated alkaline waters does not prevent the proper absorption and assimilation of the fat taken with other food; and C. Dapper had already proved the same to be the case in regard to courses of muriated waters, such as those of Kissingen and Homburg. Kraus gave considerable amounts of fatty foods to patients suffering from complaints likely to be met with at Carlsbad, treating them at the same time with fair daily doses of Carlsbad (Muhlbrunnen) water, and he found that the percentage of the ingested fat which could be recovered again in the fæces of these patients was not unduly increased by the use of the mineral water. Dr. Parkes Weber hereupon remarks that a fatty diet gives rise to trouble in certain cases independently of spa treatment, and in such cases the diet whilst the patient is at the spa will have to be regulated. For instance, patients who suffer from obesity or from gastric dilatation due to fermentation of the contents of the stomach must have their diet regulated with respect to fatty and fat-producing foods. There is no doubt that the facility for regulation of diet at some spas, such as Carlsbad, has greatly helped in their reputation for the treatment of certain affections, especially diabetes and obesity. Spas where by a strict *a la carte* system of dining the carrying out of dietetic rules is made comparatively easy are likely to outstrip their rivals where a *table d'hote* system prevails. Moreover, the strict quantitative limitation of the evening meal must have had, and still does have, a wholesome effect at many health resorts. The patients can can go to bed earlier after a light meal—a great advantage when they have to rise at a very early hour to drink the waters—and in most persons when free from excessive mental work the digestive powers are probably strongest during the middle of the day. In many persons, also, temporary discontinuance of strong tea or coffee in the morning can do no harm, and can best be carried out at health resorts during periods of rest from the mental work of ordinary life. The substitution of farinaceous soup, &c., which formerly constituted the morning meal at various spas, might still often be recommended.

Chloroform in Dental Practice.

A death under chloroform occurred at Rhyl on Aug. 13th under circumstances which confirm our often expressed opinion that chloroform is not a desirable or safe anæsthetic for dental practice. (London Lancet, Sept. 4, 1897). The patient in this case was a woman, aged twenty-nine years, in good health, and described as being strong and free from fear of the anæsthetic. She had very bad teeth, and a local dentist advised the extraction of twenty-seven of them. A medical man was called upon to give an anæsthetic, and he advised the use of chloroform. In his evidence he said that

he had examined the patient and judged she was in a fit state to take the anæsthetic. He considered nitrous oxide gas would be insufficient for so extensive a clearance, and added: "It was quite a usual thing to administer chloroform in cases of dental surgery which occupied some time, *and chloroform was as safe as any other anæsthetic.*" It is to be presumed that this statement, besides its general application, was meant in particular to apply to dental surgery, and in this connection that we cannot but feel so sweeping a pronouncement is hardly in consonance with either the facts of this particular case or with the experience of the last fifty years. To refer for one moment in detail to the case. The patient was placed in a chair, and after the chloroform had been given from a mask for fifteen minutes the medical man signed to the dentist to commence the extractions. This was done, and after three teeth were removed the operator was requested to stop, as the patient had become "blue in the face," and "the breathing had stopped." It is further stated that just before the operation the patient struggled slightly, "as was usual in cases of the sort." They lifted the patient out of the chair, "but she was dead three or four minutes after she was placed on the floor." It would seem, therefore, that when the patient struggled she was not fully under chloroform, and this was after about thirteen or fourteen minutes of inhalation, then she at once became fully under the influence of the anæsthetic and the operation was proceeded with. Probably during that struggle the overdose was inhaled, and the interval before the chloroform actually stopped respiration by its action upon the medullary centres was taken by the dentist in drawing three teeth. It is obvious that the actual manipulation of the tooth extraction interferes both with respiration and the proper watching of the chest movements. Many medical men on such occasions assist their dental colleagues by holding the patient's head, and so have their attention withdrawn from the function of respiration and the condition of the patient. These are manifest objections to using chloroform, and a still further one is that it has been shown that the sitting position is one which increases the patient's risk under that anæsthetic. We cannot agree with any statement that chloroform in dental operations is as safe as ether or the A. C. E. mixture. It is a very great question whether it is wise to attempt to remove twenty-seven teeth at one sitting; but if cases do arise in which such an heroic proceeding is considered justifiable, then certainly ether or a mixture should be used rather than chloroform. The only way in which the last-named anæsthetic can be at all safely employed in dental surgery is where the patient is placed under the same conditions as if he or she were about to undergo a major surgical operation. This cannot be done in the ordinary routine work of the dental surgery. The patient must be prepared by abstention from heavy food, must have all clothing absolutely removed and replaced by a dressing-gown, and must be placed in the recumbent position. We cannot but feel that for so comparatively trifling a matter as having teeth out no one's life should be jeopardised by the use of chloroform unless the fullest precautions are taken and the risk looked clearly in the face. Many country dentists may point to a large experience of chloroform without mishaps, but their fortunate cases cannot counterbalance or lessen the horror of a fatality such as that at Rhyl. We cannot speak too emphatically. This case is almost identical with one which happened only recently and which was recorded in our columns.

The Influence upon Nervous Affections of Operations upon the Female Pelvic Organs.

The Editor of the Boston Medical and Surgical Journal believes that the trend of medical opinion of late years has been pretty steadily against the efficacy of operations upon the pelvic organs, especially oophorectomy, as a cure for nervous or mental affections, always excepting those cases where disease of those organs demands such operation, independently of the nervous condition. At a meeting of the Association of American Physicians, in 1891, Dr. Wharton Sinkler, of Philadelphia, took the ground that it was unjustifiable to remove healthy ovaries in cases of nervous disease, and the late Dr. Lusk, of New York, said that he was tempted to regard such a proceeding as malpractice. A recent inquiry conducted by Drs. Angelucci and Pieraccini of the provincial asylum at Macerata, Italy, has afforded considerable information in the way of the accumulation of statistics of cases in sufficient number to warrant certain definite conclusions.

The data which they present are based upon reports made to them by the heads of public and private asylums and psychiatric cliniques in various countries, embracing a total of 115 cases in which surgical operations were performed upon the female sexual organs, either healthy or diseased, to combat some nervous disorder or to remove diseased organs. One hundred and thirty-

seven of the aslyums and cliniques interrogated had had no cases of the sort. Out of 76 alienists, directors of asylums or cliniques, 56 more or less strongly disapproved of such operations, twelve had not had sufficient experience to warrant a personal opinion, five were uncertain, and only three favored such operations in the treatment of hysterical conditions.

Of the 115 cases six were subjected to a simulated operation for the relief of hysterical conditions. Of the remaining 109 cases 65 had healthy organs removed for the cure of nervous conditions, eighteen nervous patients had diseased organs removed, and 26 women neither insane nor hysterical had diseased organs removed. Forty-one cases of hysteria had healthy organs removed on account of the nervous trouble; of these 17 became insane, 10 grew worse, 11 were unaffected and three cured. Eighteen cases of hysteria had diseased organs removed; three became insane, six were unaffected and nine were cured. Twenty-four women neither hysterical nor insane became insane after diseased organs were removed, and two others became neuropathic. Twenty-four insane women had healthy organs removed for the cure of their insanity; 19 grew worse or were unaffected, five improved or were cured. In only 17 cases, therefore, were the results favorable, and of these only three were cured of hysteria or other nervous disturbances by the removal of healthy organs. Inasmuch as six cases of hysteria were apparently cured by simulated operations the investigators naturally inquire how far, in these cases where actual operation was done, the influence of suggestion may have been felt.

As a result of their inquiry Drs. Angelucci and Pieraccini conclude that the removal of the uterus or its adnexa, if in a healthy state, is to be prescribed as a means of treatment of hysteria or insanity, and that the existence of hysteria is almost a contraindication for any serious gynecological operation. If any such operations are undertaken the indications must depend upon the gravity of the uterine or ovarian disease, and not upon any hope of a favorable influence upon the nervous conditions; the only favorable influence upon these latter conditions is in the way of suggestion. If all other means have failed in combating hysteria, a simple incision, simulating a laparotomy, may sometimes be admissible by way of suggestion.

Taking the statistics, as the present writers have done, from reports furnished by asylums and psychiatric cliniques, it is possible that the proportion of cases injuriously affected by such operations is unduly large, since the physicians in charge of such institutions might have less opportunity for observing the cases which were entirely cured of any nervous or mental trouble after the operation. Nevertheless, any serious cases of nervous or mental trouble which were cured by operation would naturally have come under the observation of these men during the time when they were suffering from such trouble, so that the proportion is really nearer the truth than it might at first seem. Furthermore, as is well known, the statistics of cases from surgical reports only are too often based upon the immediate results of operation, without waiting to note the later developments in regard to any nervous troubles. It is therefore safe to accept the conclusions of Drs. Angelucci and Pieraccini, and endorsing the belief that the removal of healthy organs for the relief of nervous or mental troubles is wholly unjustifiable.

Bacteria of the Normal Nose, and Bactericidal Properties of Nasal Mucus.

Drs. Park and Wright, in a paper read before the American Laryngological Association, stated that ten years ago they examined ten healthy cases, and found the nose contained pathogenic germs. During the past three or four years other pathologists have made similar examinations, and have found the nasal cavity, except the vestibule, not only aseptic but its mucus even bactericidal.

Drs. Park and Wright again made an examination of thirty-six normal noses, in which every precaution had been taken to prevent contamination from the vestibule, the vibrissæ having been cut with aseptic scissors, and the vestibule sterilized. Only six of the cases failed to develop pathogenic germs in the culture medium. In many cases few micro-organisms were found, while in others large numbers were present.

Although the examination had not been completed, sufficient was learned to show that the bactericidal properties of the mucus were poor, if not entirely absent. It was found to have no effect on the diphtheria bacillus and on the streptococcus and staphylococcus. On the other hand, the cavity did not contain as many germs as might be supposed. The serum drains downward and washes the cavity, and the cilia also aid in this process. While the mucus is not bactericidal, it does not however form a good culture medium. The vibrissæ also assist in protecting the cavity. Two animals were inoculated with a virulent culture in the nose, and died within two or three days.

Clinical Forms of Hepatic Cirrhosis.

Dr. Chauffard presented to the Moscow meeting of the International Medical Congress a paper with this title. He said:

The clinical analysis of the different types of hepatic cirrhosis, to be complete, should show in each individual case the anatomical process, the pathogeny, and the course. Three conditions must be present in order to justify the diagnosis of cirrhosis: (1) The proliferation should be general, distributed throughout the entire liver; it may predominate in one or another region, but it must always be diffuse. A pericystic or pericalculous sclerosis cannot be called cirrhosis. (2) The new-formed connective tissue must be fibrous and full grown, rich in elastic fibres approaching that of cicatricial tissue. (3) The process must not be absolutely confined to the interstitial elements, but the cells must also be affected. To classify properly the hepatic cirrhoses one must take into consideration the anatomical changes and the nature of the agent producing them; in other words, the classification ought to be anatomical and at the same time etiological. We cannot understand why some hepatic cirrhoses run an acute, others a subacute, and still others a chronic course, unless we appreciate that we are in the presence of a process more or less distinctive, according to the manner and the duration of its action. Clinically, as well as by experimental pathology, we know that every toxic agent or infection capable of producing a cirrhosis can, under proper conditions, provoke any degree of inflammatory or degenerative reaction in the hepatic cell. We learn this by the study of the principal forms of cirrhosis, where we see that the irritant action of large doses of a given agent kill the cell, while the same agent in small doses continued over a long period provokes sclerosis and only later or secondarily affects the cell. So the irritant agent may be too powerful or too feeble to produce cirrhosis, as we see in the case of phosphorous or lead poisoning. Again, under proper conditions the one agent may act only on the cell or it may act to produce cirrhosis; thus the toxin of syphilis in the second stage may cause a syphilitic icterus, while at another period, when less virulent, it is essentially cirrhogenic. Tuberculosis shows this even better. If we inoculate the liver experimentally with human tuberculosis, it causes not only tuberculosis but fatty and coagulation necrosis in the liver; if we inoculate it with aviary tuberculosis, sclerosis is the usual result. Cirrhosis is therefore always the result of the action of a poison in small doses long continued; the sclerotic reaction of the connective tissue corresponds to a defensive resistance on the part of the liver to the poison, and when the toxic agent is too violent it provokes necrobiotic degeneration, but not cirrhosis. All this applies to venous cirrhosis. As to biliary cirrhosis, the question is much more obscure, since we know nothing certain of its pathogeny. If it is infections in origin, as affirmed by Hanot, it would appear to depend on a prolonged bacillary infection, and so comes under the law just demonstrated. A cirrhosis once begun becomes soon a definite disease with its symptoms, its complications, its evolutions, and its termination. These different clinical elements so group themselves as to individualize a series of types of cirrhosis, of which the descriptions are classic. But one has a very incomplete idea unless he takes into consideration also the anatomical and functional condition of the hepatic cells. Hanot expresses this very aptly when he says that the diagnosis of cirrhosis is made from the condition of the connective tissue, the prognosis from the condition of the hepatic cells. From experiments on animals (the removing of portions of the liver) we know that histologically hepatic lobules hypertrophy, that they can double or triple their size, at the same time that new lobules are appearing and developing alongside them; so we can believe that compensatory hypertrophy is a general law. Acknowledging this, we may distinguish three groups of facts: (1) The compensatory hypertrophy is insufficient or masked by the destruction more or less rapid of the glandular elements. Such is the case in the atrophic cirrhosis of Lænnec. (2) The compensatory hypertrophy may be sufficient to allow the patient years of life, but not a cure. The sclerotic process continues its work till one day secondary icterus appears and the patient dies. It is thus that the hypertrophic biliary cirrhosis of Hanot kills. We know how long the course of this disease is, and if the patient dies of an intercurrent affection we find the hepatic cells healthy, hypertrophied, or in full karyokinetic activity. But if the cirrhosis has time to complete itself we find the trabeculæ parted, the hepatic cells fragmented, deprived of their nuclei, or even fatty granular, and this especially in the centre of the lobules. (3) Finally the compensation may remain sufficient for such a long time that an apparent cure has taken place. We see this in the hypertrophic alcoholic cirrhosis of Gilbert and Hanot. From the works of these authors we know how different is the prognosis when the liver is atrophied or hypertrophied. In the

latter case it is not rare to see under milk diet and diuretic medication the ascites disappear and the general condition improve to the point of apparently perfect health. The patient seems actually to be cured. The conclusion therefore is, that the liver reacts under the form of cirrhosis only when the pathogenic agent is relatively moderate and is prolonged; that the sclerotic process is to a certain point a process of protection and defence to the hepatic cell; that this in its turn participates in the disease either by compensatory hypertrophy or following the conditions is destroyed.

The Agglutinations of Typhoid Bacilli by Chemical Substances.

Malvoz has investigated the action of various chemicals upon typhoid bacilli. (British Medical Journal, Sept. 11, 1897). In the first place he finds that certain bodies such as formalin, corrosive sublimate, peroxide of hydrogen, and strong alcohol, coagulate the bacilli and produce a fairly typical agglutinative reaction, but only when used in concentrated solutions. The essential characteristic of the typhoid serum in this respect is, however, its power of acting when extremely dilute, and the author's next endeavour was to find some chemical substances which should have a comparable action. Chrysoidine, which is stated by Blachstein to agglutinate cholera vibrios, was found by Malvoz to have no action on typhoid bacilli, nor was any reaction obtained with induline and nigrosine; safranine and vesuvine, on the other hand, gave the typical reaction even in very dilute solutions, and the agglutination was rendered more obvious by the slight colouring of the bacilli. Thus 3 drops of a 1 in 1,000 solution of these reagents added to a 1 c.cm. of typhoid emulsion produced the characteristic reaction just as the blood of a typhoid patient would. Mineral acids, phenol, lactic acid, and chloroform have no agglutinating power, while salicylic acid and strong solutions of potassium permanganate give a reaction which is by no means characteristic. Caustic soda and ammonia do not agglutinate bacilli suspended in distilled water, but act on them if in tap water, a difference no doubt associated with the deposition of calcium carbonate. Salimbeni's experiments on the part played by oxygen in agglutination are not confirmed by Lambotte, Malvoz finds that an artificial "typhoid" serum can be made by adding 1 c.cm. of a 1 in 1,000 solution of safranine to 9 c.cm. of ox serum. He suggests that as the urine of typhoid patients give a marked diazo-reaction, the agglutinative power of their serum may be due to a nitrogenous compound allied to vesuvine or safranine. He has further applied his discoveries to the differential diagnosis of bacteria; thus, for instance, a concentrated solution of formalin agglutinates typhoid but not colon bacilli, the difference being visible to the naked eye. Again, 1 in 1,000 safranine serum prepared as above causes agglutination of typhoid bacilli, while the colon bacillus is not affected by a 1 in 100 serum. Some further experiments tend to show that the ciliated envelope of the bacillus is the seat of the chemical changes leading to agglutination. Finally Malvoz suggests that his results may be applied clinically with advantage.

Sulphate of Duboisin.

J. H. Skee has used sulphate of duboisin for some time, administering it hypodermically and by the mouth, generally in doses varying from gr. 1-100 to gr. 1-22, though he has given as much as gr. 1-24 at one time. (Dublin Journal of Medical Science). The hypodermic method is the surer and safer, and is followed by fewer bad consequences. The following is a summary of the effects of the drug in the author's experience: Within 15 to 30 minutes of the hypodermic administration of a single dose aggravation occurs, the pupils become dilated, and the face flushed. Cardiac action becomes more rapid, accompanied by a full and safe pulse. Speech becomes thick, drawling, and slow, and, if the dose be large, inarticulate. The mouth and throat are dry, and the gait ataxic, the general appearance of the patient much resembling that characteristic of alcoholic intoxication. The excitement rapidly passing off is followed by drowsiness and a feeling of calm, which is followed by sleep, varying in duration from three to ten hours. There is no recurrence of excitement when the patients are roused from sleep; the only bad effects are dryness of the throat, and in some cases slight impairment of vision and occasional slight headache. There is no impairment of appetite. This is the general action of a single dose of the drug, except in a certain class of cases to be mentioned later. If given internally there is impairment of the appetite, with a tendency to faintness and vomiting. Continuous administration is not successful; there is quiescence while the patient is under the influence of the drug. There is weak pulse and tendency to faintness. Marked ataxia is also present. Hallucinations of sight and

hearing occurred in some of the cases so treated. Loss of weight sets in rapidly, but is easily recovered from. Duboisin was used in all cases in which marked excitement was a symptom. In acute mania its use was not followed by any beneficial results. Single doses, though producing quiet for a time, seemed to cause more excitement after. If continuously administered it induced rest and quietness, but a rapid loss of weight set in which necessitated the suspension of the drug In delusional mania it was used only if required for outbursts of excitement; its action was entirely satisfactory. Excitement which would ordinarily have lasted weeks was cut short. Other sedatives did not have this effect. In chronic mania its occasional use was followed by satisfactory results. In general paralysis duboisin was used during violent excitement, both occasionally and continuously, with satisfactory results. On one occasion a congestive seizure followed the exhibition of gr. 1-32 of the drug. In epilepsy duboisin is not of much use. Its action is uncertain, some cases of epileptic excitement being relieved, while in others the excitement was increased. It does not appear to have any action in altering the frequency of the fits. In melancholia the worst possible results were obtained. In no single case was there the least relief, while in most the excitement was increased. There was a tendency to syncope, and in some cases hallucinations of sight and hearing were observed. In dementia, used occasionally, it gave satisfactory results, ensuring quietness and rest at night. Dangers: If carefully used these are few. Cases of valvular heart disease have received the drug without any bad results. Cardiac failure occurs when it is continuously administered, especially if given internally, and is due to too large a dose being used. One case (acute mania) in which the drug was pushed suffered from a slight convulsive seizure, characterised by twitchings of the muscles of the face and limbs. Increased excitement occurs in some cases not tolerant of the drug. Indications for and against its use: Cases of excitement due to hallucinations and delusions give excellent results. In all forms of chronic insanity with excitement, and in occasional cases of epilepsy, it may be used as a sedative with good results. The author concludes that duboisin should be used only in physically healthy persons. It should never be used, or only very carefully, in debilitated persons. It is not suited to acute mania, and is distinctly injurious in melancholia. Duboisin, Skeen thinks, is preferable to hyoscine or hyoscyamine, as the quiescent state established by its use is of longer duration, and there is less prostration during or after its use than is the case with those drugs. The after-effects are not so marked, and few serious cases occur. Its action in some of the worst cases is described by the patients as soothing rather than prostrating, and it does not interfere with the recovery of those treated with it.

Catheterism of the Ureters in the Male.

Dr. W. Meyer, in the New York Medical Journal, gives an account of this exceedingly interesting procedure and reports seven cases in which it was successfully carried out. He thinks that it is always possible to catherize the ureters in cases permitting cystoscopy—that is, if the caliber of the urethra is sufficient to permit passage of the instrument, if the bladder has a capacity of three or four ounces, and the fluid in the bladder can be kept perfectly transparent.

The writer gives the histories of his seven cases in detail. For the procedure in question he always cocainizes the urethra and bladder, but never employs a general anesthetic. The necessity of a trained assistant is emphasized. In carrying out the procedure the author recommends the following:

1. Wash and cocainize the bladder according to well known rules.

2. Fill the bladder with from five to seven ounces of clear fluid.

3. Introduce the instrument. For this purpose the ureter catheter should be pushed down to the internal opening of the canal of the cystoscope; the lid of the latter should be pulled out about one-third of an inch.

4. As soon as the beak has entered the bladder the catheter should be gently pushed forward into the vesical cavity by about one-half to three-quarters of an inch, and then the lid should at once be pushed back into place—*i. e.*, it should be fully closed.

5. After the interior of the bladder has been satisfactorily inspected and the ureteral openings have come into view, approach one of them.

6. Let the ureteral opening appear at the very end of the cystoscopic picture, farthest away from the middle of the bladder, but keep it under your direct inspection, with the prism as near to it as possible.

7. Push the catheter gently forward; if the beak's direction is a proper one—*i. e.*, if it is parallel with that of the lower end of the ureter—the ureteral catheter will almost invariably earily enter the mouth, when conducted by a trained hand.

8. Allow the catheter to proceed not

more than one or two inches into the ureter, and withdraw the wire mandrel. Then, as a rule, urine will begin to flow drop by drop at intervals or continuously.

Calomel and the Citric Fruits.

An editorial in the August number of your journal entitled "Calomel and the Citric Fruits" invites the experience of all medical men.

Throughout the entire South and West the impression is wide spread that Calomel and acids and acid fruits—notably those of the Citrus family—are incompatible, that ptyalism is a sure Concomitant of such treatment. During the winter Sessions of 1879 and '80 and '80 and '81 of the Medical Department of the University of Louisana (now Tulane), I had the opportunity of thoroughly testing this alleged incompatibility in the wards of the great Charity Hospital of this City. At that time I was Chief of Clinic of the distinguished professor of Materia Medica, Dr. John B. Elliott. We agreed to order Calomel in full, medium and broken doses to all patients entering our wards, standing in need of purgatives, and with the Calomel a pitcher of iced lemonade was ordered for each patient. Gradually we substituted the mineral acids, Hydrochloric, Nitric, and Nitro-Hydrochloric, for the lemonade. Oranges, apples and pickles were neither ordered nor interdicted during these many months of experiment. Not one case of ptyalism occurred in our wards during those two sessions. These experiments were keenly watched by the young men attending lectures, at that time, and yet most physicians still persist in cautioning their patients against acids whilst they are taking mercury. Instead of being contra-indicated the reverse is true as Citric and Malic acids convert a portion of the Chloride into the more soluable salts, the Malate and Citrate, thereby necessitating the administration of a smaller quantity of mercury. Strange as it may appear I have never seen any allusion in a medical work to the necessity of using great caution in allowing much Salt or Salted meats in conjunction with Calomel. Forty years ago mess pork and home cured bacon were eaten all over the South to the almost total exclusion of fresh meats. At that date it was also customary for many physicians to combine Dover's powders with Calomel. Lemons were very scarce and high and entirely beyond the reach of the great mass of people, yet practically the entire South was at that time Salivated, a fact due, not to the lemons, but rather to the corn "pone," corned beef, salt pork and the combination of Dover's powders with the mercury.

T. S. Dabney, M. D.

New Orleans.

Effects of Choline and Neurine of the Blood Pressure.

Dr. Mott at the Toronto meeting of the British Association for the Advancement of Science, gave an account of the effects upon blood pressure produced by the injection of choline and neurine and allied products. Normal cerebro-spinal fluid produced no effects, while that obtained *post mortem* from cases of general paralysis of the insane produced a fall of blood pressure. This is not due to a proteid body present; for after coagulation by boiling, or precipitation by alcohol, a similar effect is produced. Neurine hydrochloride in 0.1 per cent. solution gave a similiar fall, but in most cases this was followed by a rise and then by a more persistent fall of blood pressure. Choline hydrochloride in 0.2 per cent. solution gave results identical with those obtained by the pathological cerebro-spinal fluids. Blood taken from patients suffering from pseudo-apoplectiform convulsions of general paralysis was precipitated with alcohol, and the filtrate, after evaporation to dryness and solution in saline, injected, and the effect produced corresponded entirely with that obtained with pathological cerebro-spinal fluids and with solution of choline. Normal blood gave a negative result. The fall of blood pressure produced by these various reagents is cardiac in origin. This was established by plethysmographic tracings and by experiments on the frog's and mammal's heart. This agrees very well with what is found in general paralysis, cardiac weakness, and enfeebled circulation.

Suicide in Japan.

In the Lancet Dr. Kokufu says that at the end of the last decade suicides in Japan reached their maximum—viz., in the years 1885 and 1886. This recrudescence corresponded with a notable rise in the cost of living. In fact, the number of suicides year by year increases or diminishes in sympathy with the rice crop. The age most favourable to suicide is twenty for females and twenty-five for men. After twenty-five, women seldom make away with themselves, while it is not till they have passed their fortieth year that men may be regarded as beyond the dangerous period. From

these facts M. Kokufu draws the inference that the women, once married, accept life as it presents itself, and that the men remain a long time at the mercy of ambition and avarice. Poison and fireams are not the means by which suicide is mostly effected, being found to be uncertain and "inconvenient." But every Japanese of either sex carries a long waist belt, which enables him or her on the slightest provocation to put an end to life by strangulation. It is in the great centres of population—not in the rural districts—that most suicides occur. About half the tragedies are due to cerebral derangement, a fourth to reverses of fortune, an eighth to bodily suffering, and the residue to privation, remorse, thwarted love, or domestic quarrels.

What's the Matter with Our Classical Text Books on Practice of Medicine?

There is not a text-book within my knowledge, that has a chapter on continued or prolonged malarial fever, although these fevers have prevailed in all Southern countries for centuries—with now and then a brilliant essay, written by an intelligent experienced medical man, setting forth fully their etiology. Yet they are ignored by our authors. Some of them admitting that there is a class of fevers in the South not well understood—but the mass of evidence compels them to admit the fact No less an author than Prof. Osler boldly says there is but one continued fever, and that is Typhoid. What is such a dogmatic assertion worth, coming from any source, that has no experience with the fevers of the South. We have thousands of intelligent medical men of the South who are misled by our Northern brothers, who do not recognise the character of the fever, but may treat it as a Typical Typhoid, Typho-Malarial, Thermic, Climatic, Slow Fever, and a host of other names too numerous to mention. No less an author than Dr. Murchison, in his great and classical study into the nature of typhus and typhoid fevers, leaves out two hundred cases that could not be classified as either typhus or enteric cases. Dr. Wunderlich and Murchison both refer these anomalous fevers to a combination of poisons of typhus and typhoid and that the characters of each do not remain distinctive. Dr. W. T. Gairdner notes the many anomalous fevers which at times have quite overcome the number of typhus and typhoid types. Is it not strange that men of such high and scientific attainment should have never once thought of or mentioned malarial infection? It will be the proudest day of my life when I shall have succeeded in getting my Southern brethern to cut loose from the false teaching of our text-books and make use of some common sense in combatting the persistent fevers of the South. Quit this manner of treating continued malarial fever as a Typical Typhoid, Thermic, Catarrhal, Slow Fever, &c. I can assure them that the persistent exhibition of quinine in proper dosage will cure every one of them. This assertion is backed by thirty or forty years of experience in Texas. Continue the quinine in 10 gr. doses or more for one, two or three weeks if necessary. Fear not of success. The objection urged by many intelligent physicians against a continuous form or type of malarial fever (calling it a typical typhoid) is that quinine will not arrest it in a few days. They seem to think that a few doses of quinine is quite a satisfactory test to determine the diagnosis. I take the position that an ordinary quotidian, tertian or quartian-type of malarial fever or an Estivo-Autumnal attack of fever cannot be cured with a few doses of quinine in any amount. The chill and fever can be checked or silenced, but the victim still remains with his blood tissue largely dispoiled as shown by the hæmutskoit. In some cases the blood contained (59) fifty-nine per cent. by volume of redblood-cell and that, therefore, there was a loss of 41%. Fleischl's hæmometer recorded 42% of hæmoglobin, a reduction of 58%. These results also prove that there was a greater reduction in the amount of hæmoglobin, than in the quantity of red blood cells, and that each existing red corpuscle contained 17% less hæmoglobin than normal. Eight days after this observation the red blood corpuscles had risen to 68%, a gain of nine per cent. and the hæmoglobin to 58%, a gain of 16%. The next case examined the red blood corpuscles were reduced to 60% and the hæmoglobin to 48%, showing a loss of 40% of red blood corpuscles and 52% of hæmoglobin. The individual red blood corpuscle containing 12% less hæmoglobin than normal. In a weeks treatment there was a gain of 5% in red blood cells and 13 of hæmoglobin. The above observations are taken from a clinical lecture delivered at the Philadelphia Hospital, by Dr. Judson Doland. Thus it will be plainly seen that to restore the red blood cells and hæmoglobin in the simple type of malarial fever, we would be compelled to ply our patient with the best hæmatinics, such as quinine, arsenic, strychnine and iron for a month or more. Then with what show of reason? could we expect to abort a continued type of malarial fever (which may be likened to a chronic

malarial infection) with a few doses of quinine in a few days. When it is a well established fact, that quinine is not near so effectual against malarial poison, when given during the paroxysm. I am of the opinion that pigmented malaria bodies and crescentic bodies, may be found in the blood of those suffering from continued malarial fever, but never a full formed plasmodium malaria. I think that the continuous type of malarial fevers may be due as much to the thermic condition of the atmosphere, impressing the nervous system, as to the malarial poison. That the persistent exhibition of quinine in proper dosage will arrest it, I am certain, and that quinine, arsenic and iron will restore the patient to good health properly administered, when continued, sufficient length of time, with proper observance of hygienic and dietary rules. We doubtless have fevers of several days duration induced by over exertion in the hot sun—as in a game of base-ball by persons unaccustomed to such violent exercise. Here the blood becomes rapidly filled with oxydised-muscular tissue, the lungs are more or less distressed or congested during the active running, the blood fails to get relieved of the carbonic acid and the red blood cells fail to receive their proper oxygenation. The eliminative organs fail to excrete or eliminate the debris, as rapidly as accumulated, hence the high temperature. Restore the eliminative organs and give quinine as a reconstituent, followed with proper tonics and nourishment will restore our patient to health.

J. H. Sears, M. D.

Tuberculosis—Medical Illusions.

In medicine if there be one crying need more than another it is accuracy in knowledge. So much is taught as truth that is in the shadow-land of uncertainty; so much assumed that cannot be demonstrated. To illustrate: a, Tuberculosis is infectious, *i.e.*, all exposed to the tubercle bacillus take the disease. The reception of tuberculosis is therefore a question of exposure as in Measles, Mumps or Variola. As all do not take the diseases named so all do not take tuberculosis. Prevention of infection is prevention of exposure, hence we are hedged on every hand. We must do this or we must not do that. Danger signals are placed all along the line. This is perfectly proper provided protection be assured. As exposure cannot be prevented there is no permanent control of the disease. The accuracy of this is seen in the dead and dying on every hand. Is it not time to call a halt? The physical condition at present is analogous to the spiritual condition of the past. We are placed in a well of glare ice sixty feet deep. God has provided no means of rescue or escape but He will eternally punish if we do not get out. How hopeless the situation. As sentient beings we are placed in this world with destroying germs on every hand. There is no possible means to escape these death dealing germs. We must conquer these germs or die of a germ disease. How hopeless the situation! The writer feels more hopeful. He has shown none take tuberculosis however great the exposure unless he have the precedent state; that this state is induced in one way—suspension of atmospheric influence—and is under control. The state being under control the disease is under control and *that without reference to the so-called germ.* b, Tuberculosis is caused by the tubercle bacillus. Why? The bacillus is commonly found in tuberculous tissue. Taken from this tissue and injected into the tissue of a healthy guinea pig, this animal dies af tuberculosis, and so ad libitum. The bacteriologist says this is positive proof the germ causes the disease. Let us examine. It is assumed 1st, The human race is a race of guinea pigs. This assumption is false. The human race are not guinea pigs now, and have never been in the memory of the oldest inhabitant. A human and a guinea pig are separate and distinct animals. It is assumed 2nd, The method of injection is natures method. This assumption is false. Nature never uses hypodermic needles in transference of disease. The animal selected and method used being different than the one under consideration, could any logician claim the same or a positive conclusion? The bacteriologist claims a conclusion both similar and positive. Are one or more false premises necessary to render a conclusion accurate? *To a civilized world, the proof that tubercle bacilli cause tuberculosis stands inadequate.* What does cause tuberculosis? Suspension of atmospheric influence. How do you know this? By observation that no animate creature has tuberculosis unless he in some way has suspension of atmospheric influence; that those animals having the greatest suspension are most prone to the disease; that those having no suspension are free from, or do not have the disease. Yet further, by observation that animals changed from no suspension of atmospheric influence to suspension of atmospheric influence at once take the disease tuberculosis. But, hold! If tuberculosis be caused by suspension of atmospheric influence, why not prevent the disease by preventing sus-

pension of atmospheric influence? The writer asks *why not?* A step further. If tuberculosis be caused by suspension of atmospheric influence, *why not cure tuberculosis by the open air treatment?* Why not?

H. H. Spiers, M, D.

Successful Treatment of Sarcoma by Electrolysis and Cataphoresis, Combined with the Internal Use of Donovan's Solution.*

This was the subject of a paper read by Dr. J. McFadden Gaston at the American Surgical Association, May 6, 1897. He said:

The distinguishing features of benign and malignant tumors are supposed to depend upon the difference in origin, and while other abnormal growths result from the development of micro-organisms they have no part in these neoplasms.

The various benign tumors are produced from tissues corresponding to those of their seat, and are styled homologous, while the malignant tumors have different elements from the surrounding structures, being designated as heterologous formations.

It is held by some pathologists that the source of malignant growth is found in the fœtus, and that the pre-existing state leads ultimately to the modification of structure presented in postnatal conditions. Yet this does not seem compatible with the usual late appearance of malignant neoplasms.

Professor Senn thinks that the definition of a tumor should explain its origin, its histological characteristics, and its behavior towards its immediate environment. He refers to the different attempts to define tumors, and gives his own definition as follows: "A tumor is a localized increase of tissue, morbid tissue is destroyed or transformed into granulation tissue."

It is notable that the process adopted by Dr. Massey contemplates a comparatively rapid breaking down of the morbid structure and a disintegration with discharge of the *debris*, whereas the course pursued in a different class of cases by Dr. Robert Newman is only "to use weak currents of from three to four milliampéres, *seances* lasting not more than from five to ten minutes, with interqals of about one week or longer." He says that "electrolysis acts as a chemical decomposition by absorption, which never burns or destroys tissues. It is not followed by hæmorrhage or other unpleasant consequences."

The internal use of the preparation of arsenic, urged especially by Lawson, and the employment hypodermically of the antitoxine by Coley, have been attended with benefit in some cases and failure in others.

The feasibility of curing a malignant growth without surgical interference by the knife or cauterization has been thought questionable; and yet there are some instances of the disappearance of tumors which were recognized as malignant neoplasms under the influence of constitutional and local measures which are worthy of consideration.

In view of facts indicating the practicability of treating malignant inoperable tumors by electrolysis and cataphoresis, I undertook the management of a case in which the diagnosis of sarcoma was previously made by two colleagues based upon macroscopic and microscopic tests.

A white boy of twelve years of age suffered for some months from a growth in the hypogastric region, and was placed under the care of Dr. J. B. S. Holmes, of this city. An exploratory incision was made by him diagonally acress the right flank above the internal abdominal ring, and into the indurated mass of the tumor. It was found that it presented the characteristics of sarcoma, with such adhesions to the surrounding structures as to preclude any attempt to remove it by the knife. The incision was accordingly closed, and an unfavorable prognosis of the case was given to the parents of the boy. Dr. William Perrin Nicolson also examined him and fully concurred in the views of Dr. Holmes. It was afterwards determined to take the patient to Richmond, Va., where Dr. Hunter McGuire examined the case, and reopened the incision, so as to procure a specimen of the tumor for microscopic investigation. He was impressed with the serious nature of the case, and declined to undertake any radical operation. The result of a careful examination of the specimen with the microscope by Dr. M. D. Hoge, Jr., of Richmond, indicated that the tumor was a small, round-celled sarcoma, and thus confirmed the previous diagnosis in the case.

This patient was turned over to me for examination on the 16th of November, 1895, and I found an abdominal tumor, extending from near the anterior inferior spinous process of the ilium and the adjacent portion of the pubic bone across to nearly the corresponding line on the opposite side, and reaching from near the symphysis pubis to the umbilicus, with marked induration of the mass. There was no mobility in the tumor, and adhesions seemed to exist between its anterior surface and the abdominal wall. An exact measurement of the out-

*Annals of Surgery, August, 1897.

lines of the tumor gave in the transverse diameter six inches; in the longitudinal diameter, seven inches; in circumference, twenty-one inches.

The anterior surface was smooth and somewhat prominent, but without any salient projection. Moderate pressure by palpation was borne without flinching, and there was no complaint of sharp pain or discomfort in that region. The general condition of the boy was that of cachexia with pallor and weakness, but without any marked emaciation of body or limbs. With these facts before me, the history of the family, given by the father of the boy, threw no light upon the case, and I felt constrained to accept the view of the case taken by my colleagues, as reported to me.

It was evidently impracticable to do any radical surgical operation, and although I was not aware that Dr. Massey had then reported his cases, nor had I received any report of success in the use of electricity for sarcoma, I came to the conclusion that it offered some prospect of relief in this case. Upon stating my conviction to the father, who is a very intelligent man, he manifested a favorable disposition towards accepting my proposition as a *dernier ressort*. My suggestion was adopted also in regard to combining an alternative course of internal treatment, with the resort to electrolysis locally, and the following prescription, which I have found to exert great resolvent influence in other cases, was ordered for the patient:

℞ Syrup trifolium compound, fluidounces, 3½;
Donovan's solution (liq. ats. et. hyd. iod.) fluidounce, ½.

Sig.—Mix, and take a small teaspoonful with water three times a day.

It may be stated that each fluidounce of the trifolium syrup contains the following: Red clover-blossoms, 32 grains; stillingia, 16 grains; lappa, 16 grains; phytolacca root, 16 grains; berberis aquifolium, 16 grains; casca amarga, 16 grains; xanthoxylum, 4 grains; iodide of potassium, 8 grains.

This was employed simply as a menstruum for the more active preparation of the double iodide of mercury and arsenic, known as liquor arsenici et hydrargyri iodidi in the United States Pharmacopœia The patient got about one grain of iodide of potassium with eight drops of Donovan's solution in a teaspoonful of the mixture three times a day, and took it, without any disturbance of his stomach or bowels, continuously while electrolysis was applied to the tumor.

I am giving a somewhat minute account of the medical treatment in this case so as to enable others to judge of the influence of medication upon the result when considered in connection with the application of electricity locally. On the 17th of November, 1895, I commenced the use of electricity with a twelve-cell battery, manufactured by Waite & Bartlett, having the cups of glass, in which the zinc and carbon plates are immersed in a solution of bichromate of potassium, which was kindly furnished by Dr. J. A. Childs, of this city.

The needle representing the positive pole was introduced into the substance of the right side of the tumor, and the sponge electrode representing the negative pole, about two inches in diameter, was placed on the left margin of the tumor, having the connection of six cells, and keeping up the current for five minutes daily. *Seance* was gradually increased during the first week, and afterwards, until the time was extended to ten minutes; the punctures were made about half an inch apart, going around the outer boarder of the tumor; and after the 25th of November the applications were only made on every alternate day, until the 20th of April, 1896, when they were made every third day. In the mean time the needle was changed to the negative pole, and on December 29, 1895, Donovan's solution was commenced upon the positive pole by saturating a small piece of cotton with it, and laying it upon the central portion of the moistened sponge electrode. This process is known as cataphoresis, by which medicinal substances are introduced into the body with the galvanic current. Knowing that Dr. Hunter McGuire had obtained satisfactory results in the treatment of goitre by this means, I wrote to him for information as to the method of procedure, and he kindly furnished me with an account of the process adopted in his cases which has served as a guide in my application of the medicated electricity in this case.

Having no means of estimating the voltage or ampérage, with the resistance by ohms, I depended upon the manifestations of local effects, and graduated the number of cells accordingly. When the fluid has become weaker by repetition of the current the number of cells has been increased, and after renewal of the fluid fewer cells have again been employed in making the applications. Without regard, therefore, to an accurate scientific record the clinical result has been closely watched, and in the course of the treatment a larger battery has been used, so as to get the effect of a weaker current diffused over more space by having a larger number of cells included in the connection of the poles. This was resorted

to when the force of the galvanic current was materially lessened by repeated application of the battery with the same fluid. And as many as thirty cells have thus been brought into the circuit without any marked inconvenience to the patient. The effect was marked by minute vesication alternated with small pits over the part to which the Donovan solution was applied, while the usual liberation of gas and some exudation of fluid occurred around the needle of the negative pole. After encircling the entire tumor with the punctures the needle was dispensed with, and another sponge electrode substituted for it; when no sign of any irritation was apparent at the negative pole, but the vesication continued to appear at the seat of the positive electrode, when it was applied for as much as ten minutes, with the pledget of cotton, soaked in Donovan's solution, placed on the moist sponge.

In the mean time notable changes were observed in the size and density of the tumor, and in the general condition of the patient. The border-line had receded decidedly from its original limits, excepting at its encroachments upon the horizontal ramus of the right pubic bone, where it remained in such close proximity as to give the impression to the touch that the tumor was attached to the bone.

The measurements, on March 1, 1896, of the tumor, made by my son, Dr. J. McF. Gaston, Jr., gave for the longitudinal diameter five inches; for the transverse diameter, four and a half inches; for circumference, fifteen and a half inches; showing the great reduction in the respective dimensions of two inches, one and a half inches, and five and a half inches from those of November 18, 1895, being three and a half months.

Another measurement, made the 29th of July, 1896, by my son, was as follows: Longitudinal, median line, three and a half inches; transverse line, at broadest line, three inches; circumference, ten and a half inches; making a reduction, in four months, in the respective dimensions, of one and one-half inches, one and one-half inches, and five inches in the previous measurement. The mobility of the small mass remaining was now very notable, when the tumor was caught up between the thumb and fingers; but there was still an attachment between the tumor and the parietal wall, and some slight oozing of a serous nature from the outer end of the incision. This appeared to discharge from the substance of the tumor, and indicates persistent degeneration in it.

The general health of the patient has very materially improved, and having undergone examination at different periods since being under my care by Drs. Hunter McGuire, J. B. S. Holmes, Arch and J. C. Avery, they all coincided in the favorable progress of the case.

My case illustrates another phase of electrolysis and cataphoresis. There was a marked diminution in the induration of the tissue and in the general prominence of the mass, with less discharge from the incision which had been made by my colleagues before the case was placed under my care and had only partially closed by granulation.

During the month of March he was laid up with an attack of mumps (parotitis) for more than a week, and suspended the regular treatment for the appropriate remedies to combat this acute condition, but the use of this special course has since been resumed, and he has returned to his duties at school, presenting no traces of disease of a local or constitutional nature at the present time, May 1, 1897.

Honor the Physician,

"Honor the physician for the need thou hast for him, for the Most High hath created him."—Ecclesiasticus, Chap. xxxviii.

These words evidently apply to the true physician only. It is equally certain that there are some masquerading under the title of doctor who are not real and true physicians. How then are we to know who are true physicians and whom to honor?

In creating them whom does God select, the Christian or the infidel, the honest or the dishonest person, the student or the idler, the temperate or the intemperate?

Does it not seem that in bestowing these gifts to qualify them for this honor He would select the true Christian of good integrity and habits, who gives his whole time and attention to his profession, rather than the unbeliever, the unprincipled, or the person who devotes his time mostly to other matters.

If this subject were fully elaborated, it occurs to us that it would give us not only most excellent suggestions for our general deportment, but furnish at least some criteria by which persons needing them might be able to select true physicians and escape the clutches of charlatans. The true physician, when not attending his patients, is usually found in his office with his medical books and journals, refreshing his memory and storing his mind with useful information pertaining to the practice of his art, while less worthy members of the profession oftentimes give much of their time to other

things, even it is said sometimes encroaching somewhat upon matters not of their own special concern, and then endeavor to make up for lack of professional attainments by resorting to the artful schemes and tricks of empiricism. Brethren of the medical profession, lest you should be considered as belonging to the latter class, take heed of your conduct, that you may come within the scope of those referred to in the divine command which heads this article.

A. G. Blincoe, M. D.

Glandular Fever of Childhood.

Dr. Williams, in the London Lancet, under the term "glandular" fever described a condition observed in childhood which he contended was an acute specific fever hitherto unrecognized. It seems probable that the infective agent, whatever it may be, obtains entrance by the pharynx or tonsils without producing a local lesion there, as is sometimes the case with the bacillus tuberculosis. The patient is usually under fourteen years of age. There is fever, anorexia, nausea, sometimes vomiting, coated tongue, constipation, and sometimes some ill-defined abdominal pain. The most prominent and characteristic symptoms, however, are stiffness of the neck, tenderness in the anterior triangle, and some pain on movement of the head and in deglutition. There may be some undue redness of the pharyngeal mucous membrane, but throughout the whole course of the illness nothing like definite pharyngitis or tonsillitis. On the second or third day a swelling is noticed in the neck, which is found to be due to three or four enlarged glands, which can be felt below the sterno-mastoid muscle and along its anterior border. The temperature may reach 104 deg. Fahr. The glands, which are tender, remain swollen for from two to five days, and then begin to diminish. The glands first affected are, as a rule, those of the left side. Before the glands on the left side have begun to subside, those on the right side begin to enlarge, and in a day or two attain a size corresponding to that reached by those on the left when at the maximum. The disease leaves the child in an anæmic and depressed state, which may last after all trace of the lymphatic glands—which has usually ceased in ten days or a fortnight—has disappeared. The most distinctive point is that the swelling and tenderness of the glands occur without obvious lesion of the pharynx and tonsils. The adenitis subsides spontaneously. Suppuration never, or very rarely, occurs. The incubation period is stated to be from eight to ten days.

The Therapeutics of Iron.

Dr. Gellhorn, in Therapeutische Monatshefte, says the skeptical assertions of Dr. Bunge, regarding the value of ferruginous medication, at the Congress for Internal Medicine of 1895, evoked an almost unanimous and vigorous opposition in the discussion which followed the reading of his paper. The doubts expressed by him in reference to an insufficient absorption of the inorganic preparations of iron could at that time only be controverted, in the main, by the results of practical experience derived from the administration of iron. However, Quincke even then pointed out that his investigations on the subject, which had not yet been concluded, had demonstrated the absorption of iron preparations given for medicinal purposes, and their utilization in the body. In 1896, at the Congress for Internal Medicine, Quincke reported the results of his experiments which meanwhile had been completed, and which confirmed in every respect the above-mentioned statement. He had made it his aim to trace the course of iron along the intestinal canal, by means of micro-chemical reactions, and for this purpose fed white mice for a number of days with cheese, to which had been added various ferruginous preparations. The animals were killed during feeding, or after the lapse of a certain interval, and the viscera, especially the intestinal canal, hardened in alcohol, cut open and examined for the presence of iron with sulphide of ammonium as a reagent. It was thus found that iron is absorbed exclusively in the duodenum, and this applies both to the iron in the food and that administered medicinally. It was detected in the duodenal epithelium and in the stroma of the villi, and is visible even to the naked eye. Furthermore, iron is found deposited especially in the liver cells, in a form perceptible on microscopical examination, and in rare cases could be detected by microscopical means in the cortical tubules of the kidneys.

These investigations of Quincke have demonstrated incontestably that the favorable results which have been abtained, since olden times, from the administration of iron are actually attributed to its absorption, and not, as Bunge would have it, to accidental circumstances, to diet alone, or even suggestion. Control experiments in this direction with indifferent medicaments are readily carried out, and were repeatedly mentioned at the Congress of 1895. It should be added that these control experiments were followed by no change, or only by a

transient improvement in the condition of the patient.

At the last Congress for Internal Medicine, the subject of the therapeutics of iron was so thoroughly ventilated by the foremost clinicians, as well as by numerous physicians in late years, that a new contribution would appear superfluous. This subject, however, is of such immense importance to the general practitioner, that a cumulation of material is necessary in order to eliminate the least doubt as to the efficacy of a therapeutic measure which, originating at first on the basis of speculation, and later supported by the results of empirical observations, has finally been demonstrated to be of value by exact experimentation.

In the following I will only discuss the clinical aspects of this question. I was encouraged in undertaking this work by my honored teacher, Dr. Mackenrodt, who has assisted me in every possible way. In the management of chlorosis and anæmia, and the host of sequelæ of these diseases, the physician would be powerless if he had not in iron a specific, or at least a potent and indispensable adjunct to his other therapeutic resources. The patients, who belong for the most part to the working classes, give in the main the same group of symptoms: amenorrhœa, scanty or profuse, weakening, irregular, usually premature, mense; headache, anorexia and dyspepsia; neuralgias, and almost invariably marked lassitude, which interferes markedly with their ability to work. In these cases prompt and radical help must be afforded, in order to restore to the patients their full working capacity as soon as possible. It is well known that the therapeutic value of the various iron preparations differs greatly. This is shown *a priori* by the abundance of manufactured products of this kind. My experience relates chiefly to three preparations, pilulæ chinini cum ferro, formula magistralis of Berlin, liquor ferri albuminati, and the neutral Pepto-Mangan (Gude). My results with the first of these three remedies have been very indifferent, while with the liquor ferri albuminati of the pharmacopia they were somewhat better. I have instituted accurate examinations, however, with only Gude's Pepto-Mangan, and the data given further on relate to this remedy alone. Owing to my limited experience with the many other preparations employed by various authors, I would not designate the Pepto-Mangan as a universal remedy, or as the only efficient preparation.

Still another remark: There can be no doubt that our medical intervention, no matter of what kind, is materially assisted by psychical impressions. This applies especially to our female patients, who are extremely susceptible to mental influences of this character. Hence, it may readily occur at the commencement of treatment that the previous disorders are less strongly felt, and it is therefore unfortunate that an objective criterion for the existing improvement is not at our disposal, as such we would regard regular examinations of the quantity of hæmoglobin in the blood. In the observations reported these were made with Gower's hæmoglobinometer. This instrument is very convenient, and is superior to Fleischl's apparatus for the use of the general practitioner, especially on account of its cheaper cost. The tests are very exact; any existing errors are the less to be considered since they occur uniformly and in about the same degree during the entire course of the experiments.

That dietetic treatment alone may be successful in aæmic and chlorotic patients was laid down as a dictum by Immermann and Reinert at the Congress for Internal Medicine of 1895. It is natural to suppose that poor and ill-nourished persons would gain in strength under the influence of a proper and invigorating diet; nevertheless, after eight to fourteen days a cessation in the improvement occurs and the old disorders returns. These authors, as well as Nothnagel and v. Ziemsser, consider an invigorating diet as only a valuable adjunct; but of the latter, moreover, regard rest in bed for several weeks as an important factor in the cure. Since several years Mackenrodt has also instituted a large series of observations of this kind, not yet published, in which, for purposes of control, he employed quantitative estimation of the hæmoglobin. It was found by him that under the influence of hygienic and dietetic regulations alone the quantity of hæmoglobin in the blood increased only at the commencement of treatment, and then only in a dilatory manner.

In the case of one of my patients I proceeded as follows: I prescribed Pepto-Mangan (Gude), one teaspoonful three times daily after meals, and regulated the diet in accordance with the directions furnished with the preparation. Sour and fatty foods, as well as raw fruits, are to be avoided under all circumstances. Fritsch (Diseases of Women, 1892, pp. 469) advises, indeed, that the desire for acids manifested by chlorotics should be gratified. According to my experience, however, this craving for acids is to be regarded as a pathological condition of the alimentary tract.

which is made worse by further supply of acids, but can be successfully overcome by an unstimulating diet. In cases where the social conditions in any way permitted, I allowed the patient to take a small glass of red wine three times daily, but never during a period of one hour before and after the administration of the medicament, in order to prevent the combination of the tannic acid contained in the wine with the iron. The use of potatoes was restricted as much as possible, at least, during the first four weeks. Furthermore, I resorted to the dietetic regulations customary in these cases, but changed them to advantage when, as so often happens, obstinate constipation was present, following in this respect the suggestions of Hebra, which have recently been again advocated by Ruge (Transactions of the Obstetrical and Gynecological Society of Berlin, 13, III, 1896), and obtained generally excellent results. In contrast to several authors who made it a practice to remove any existing dyspepsia before resorting to the use of iron, I have followed the method of v. Ziemssen and Baumler, of at once administering iron—unless the presence of a severe gastric affection, especially ulcer of the stomach, could be positively determined—and observed as early as the end of one or two weeks an increase of appetite and subsidence of the gastric disorder.

I would lay especial stress upon systematic exercise in the open air. I ordered the patients, who, with but two exceptions, were treated out of bed, to take a stroll at midday, at first of five to ten minutes' duration. At the end of three or four days they were allowed to remain out-doors for five to ten minutes longer.

After each walk they were advised to take off their corsets, put on their slippers, and rest for an hour on the sofa. Under this treatment, the lassitude invariably vanished after a time.

In the manner thus described I have treated in all about sixty patients. In twenty-four cases I instituted quantitative estimations of hæmoglobin at regular intervals of three, five, or eight days. Under normal conditions the quantity of hæmoglobin in woman amounts to 12.59 per cent. when estimated in comparison with the other constituents of the blood. Among my cases the lowest amount met with was in a single instance, 30 per cent. of the normal, that is to say, of the above 12.59 per cent. Next to this was the following case with 32 per cent. of the normal:

Miss W. G., twenty-two years old, seamsresst, related that she had been under treatment for four years for chlorosis. Since the age of nineteen, her menses had been scanty, occurring before the usual time, and of three to eight days' duration. On September 26, 1895, a *remotio secundinarum* occurrred after an abortion induced in the fourth month. At present she complains of darting pains in the upper portions of the lungs, headaches, and rapid loss of strength.

January 9, 1896, anæmic appearance; physical examination, especially of lungs, negative. Quantity of hæmoglobin 32 per cent. Ordered Pepto-Mangan, Gude, diet, etc.

January 13, 1896, considerable improvement of the general condition. Hæmoglobin, 45 per cent.

January 17, since previous day, diarrhœa, due to gross errors in diet, troublesome eructations. Ordered tinct. opii. 15 drops three times daily. Hæmoglobin, 47 per cent.

January 21st, improved after use of tinct. opii, no more gastric pains or eructations. Headaches have completely disappeared, lassitude less marked. Hæmoglobin, 55 per cent.

January 31, condition unchanged, ceased menstruating on previous day, the flow having lasted five days.

February 8-28, Patient feels well and no longer complains of pains in the lungs. Appetite and bowels regular. Hæmoglobin, constantly 55 per cent.

March 5, no change. Hæmoglobin, 62 per cent.

March 11, hæmoglobin, 68 per cent. March 27, 77½ per cent.

Unfortunately, as in most of these cases, the patient's visits ceased as soon as she felt entirely capable of going to work. As a matter of fact, the increase of hæmoglobin in this case was tardy, as in four other cases in which the quantity at the beginning was 34, 35, 37, and 38 per cent. of the normal. In eighteen other instances in which the initial amount was higher, viz., 42–75 per cent. of the normal, progress was more rapid as a rule.

This is most strikingly illustrated in the following case.

Miss C. B., aged fifteen years, complains of violent headaches, visual disorders, loss of appetite, a feeling of pressure over the stomach, constipation, and general lassitude.

June 2, 1896, *status praesens:* mucous membranes pale; physical examination, negative; heart, normal; quantity of hæmoglobin, 45 per cent. Presbribed as in above case.

June 9, headache has disappeared; con-

dition otherwise unchanged. Hæmoglobin, 45 per cent.

Jund 16, improvement. Hæmoglobin, 51 per cent.

June 23, decided improvement. Hæmoglobin, 55 per cent.

July 8, patient free from complaint; cheeks ruddy, lips and conjunctiva red. Hæmoglobin, 78 per cent.

July 23, and September 24, continued good health.

I also derived exceedingly favorable results from the use of Pepto-Mangan, Gude, in patients who came to us for operations after having been exhausted by protracted hemorrhages. Of course convalescence in such cases is delayed; the system recuperates but slowly from the double injury inflicted by the losses of blood and the operative intervention. Digestive disturbances are especially apt to be troublesome. In these cases ferruginous medication often produces remarkable improvement.

I cannot close this paper without calling attention to the beneficial influence exerted by Pepto-Mangan, Gude, in anæmic neuralgias, and as an illustration of its effects in this class of cases add in brief the following history of a case.

Mrs. K., aged thirty-five years, very pale and ill-nourished, suffers from intercostal neuralgia on the left side.

January 30, 1896, quantity of Hæmoglobin, 68 per cent. of the normal.

February 6 In the mean time has suffered on two days with violent headaches. Intercostal neuralgia persists. Appetite good; no gastric disturbances. Hæmoglobin, 69 per cent.

February 12, no longer troubled with headaches with exception of one attack of neuralgia in the area supplied by the left supra-orbital nerve. The paroxysms of pain on the left side of the chest have become less frequent. The lassitude has subsided. The mucous membranes are still anæmic. On the whole, the patient feels better and more vigorous than before the commencement of treatment. Hæmoglobin, 75 per cent.

February 18, considerable improvement of neuralgias; no headaches, nor digestive disturbances. General health improved. Menses appear earlier than previously, this being the second day of the flow. Hæmoglobin, 73 per cent.

February 26. During the preceding days transient deterioration of her conditions owing to mental excitement. Menstrual period has been normal. Hæmoglobin, not estimated.

March 2, patient no longer complains. Intercostal neuralgias have ceased to occur except on rare occasions. Hæmoglobin. 76 per cent. March 13, health good in general. Iron discontinued on account of gastric disturbances which are said to result from excitement. Ordered strict diet and iron to be resumed.

March 19, complete restoration of health. Hæmoglobin, 82 per cent.

That the final estimates did not yield the normal quantity is not surprising since it is frequently somewhat reduced even in healthy persons. At any rate, the objective and subjective state of the patients in the above cases, as well as in the others not reported in detail, afforded the impression that a radical cure with complete restoration of the ability to work has been effected.

It must be conceded that in matters of therapeutics it is always difficult to appreciate correctly the relation of cause aud effect, and to eliminaae the factor of accidents in estimating the efficiency of any plan of treatment. And in order to arrive at a positive and unbiased decision, it is necessary to resort to a series of observations and control experiments of so great an extent that the single observer, even though he have at his disposal a vast amount of material, is only capable of furnishing a small contribution in the discussion of these questions. Furthermore, a certain amount of latitude must always be allowed to individual judgment.

Yet while fully conscious of these limitations I think I am justified in asserting that in my therapeutic trials with Pepto-Mangan I obtained all that can be rationally demanded. And I further consider myself warranted in stating that in view of the unquestionable necessity of ferruginous medication in certain troublesome constitutional affections this preparation acts as a most efficient and useful auxiliary to our therapeutic efforts.

Subcutaneous Injections of Iron in Anæmia.

Lepine, after reviewing the results obtained by previous employment of this method, gives his own results in a case of grave anæmia. (British Medical Journal.) In this case prolonged treatment with many different preparations of iron and arsenic taken internally produced no effect, and the hæmoglobin sank below a sixth of its normal amount. The patient was reduced to an extremely weak state, and was apparently dying. At this stage Lepine tried subcutaneous injections of a 4 per cent. solution of citrate of iron, 3 to 4 c.cm. (12 to 15 cg. of the salt) of the solution being injected daily. Marked improvement took place almost at once, and the percent-

age of hæmoglobin rapidly rose. In a month's time the patient was convalescent. Lepine thinks a 4 per cent. solution quite strong enough (most physicians having used a 10 per cent. solution), and points out the danger of producing the toxic effects of iron if stronger solutions are used. Hypodermic injection of 20 cg. of citrate of iron has been known to cause vomiting and fever. Also the kidney is liable to be damaged by too concentrated solutions leading to anuria and hæmaturia, and even nephritis. Hence Lepine thinks this means of administration is contra-indicated in cases where the kidneys are not sound.

Syphilis Treated with Coley's Mixed Toxins.

Dr. C. S. Evans and Dr. C. M. Paul have published in the annual report of the Cincinnati Hospital a series of fifteen cases of syphilis treated with Coley's mixed toxins, the patients' symptoms including such varied manifestations as primary chancre, secondary eruptions, broken and unbroken gummata, and condylomata lata. The treatment was in each instance commenced with the minimum dose of two minims, diluted with an equal quantity of water and injected deeply in the muscle of the buttock with an ordinary hypodermic syringe; the side was alternated each time because of the soreness caused; the injection was given every other day, and as a rule the dose was increased at each injection. The maximum dose given was fourteen minims, and it was noticeable that this dose could be continued day after day without any more disturbance than followed the initial dose of two minims. As a rule, some pain followed the injections, but this lasted only a short time and was succeeded by a soreness which persisted for two or three days, but was never so severe as to compel the patient to remain in bed. The most pronounced symptom following the injections was malaise, which was felt very quickly, and, as a rule, was peculiarly depressing, but disappeared in a few hours. Headache, diarrhœa, high temperature, and pains in the bones were also met with, but there was no formation of abscesses in connection with any of the 237 injections which were given, and apart from the symptoms above noted there were no unpleasant after effects, a thing which cannot be said of mercury. Two of the fifteen patients were treated with mercurial inunction and one with iodide of potassium before the toxin was administered. The remaining twelve were treated with toxin only. The duration of the disease in these cases was respectively five months, seven years and a half, three months and a half, two months, four months and a half, five years, four months, four months, perhaps nine weeks, six months, seven months, and five months. The duration of the toxin treatment in the cases taken in the same order was respectively twenty days, two months, twenty-seven days, thirty-nine days, fifty-seven days, thirty-two days, thirty five days, thirty-nine days, twenty-seven days, thirteen days, twenty-one days, and twenty-one days. Ten of the twelve patients had ulcerated chancres, eight of which were entirely healed and two were almost healed at the end of the treatment. In every case the eruption disappeared, the mucous patches healed, the enlarged glands became smaller, and the patient gained flesh and strength. In conclusion, however, Dr. Evans remarks that the worth of toxin is as yet mere conjecture, and that absolutely nothing can be said as to the ultimate results.

Diagnosis and Treatment of Affections of the Frontal Sinuses.

Fehleisen (Medical Record) states that in the great majority of cases of inflammatory affections of the frontal sinuses infection plays an imporfant *role*. Usually the path of propagation is through the nose. Primary inflammations may occur with, or more rarely without, simultaneous disease of the nasal cavities.

The more acute cases begin with high fever, sometimes even a chill, followed by severe constitutional symptoms. Perforations usually takes place in the anterior and inferior wall, very rarely posteriorly, towards the cranial cavity. The more usual cases are, however, the chronic, the purely chronic, as well as those whose course is interrupted by subacute attacks. Occasionally cases of frontal sinus disease are of traumatic origin. The diagnosis of acute cases is as a rule easy; chronic cases, on the other hand, are frequently mistaken for neuralgia, migraine, etc. A unilateral flow of pus in the nose should always excite suspicion of disease of one of the cavities communicating with the nose, and if it be seen to be coming from the anterior end of the thickened middle turbinated body it points to implication of the frontal sinus. In acute cases pain upon pressure is always elicited. In chronic cases pressure with a thick sound or pencil, or percussion with a pleximeter, will also cause pain. The author agrees with Kuhnt in laying great stress upon the pressence of pain when pressure is made upon the floor of the sinus—that is the upper wall of the orbit. As regards treatment,

radical interference is necessary in chronic cases. The usual methods hitherto practiced frequently fail, or at least are extremely tedious, and often a fistula remains behind. The author highly commends Hebinger's method of extirpation of the pituitary membrane after having opened the sinus with a chisel. A large external opening is made, the front wall of the sinus and frequently a portion of the inferior wall being removed. The bony edges are levelled as much as possible, so that no bony cavity but a shallow depression results, to which the soft parts can be pressed by a bandage. The mucous membrane is thoroughly removed, the upper part of the naso-frontal duct being also robbed of its mucous membrane. When the cavity is obliterated in this way the naso-frontal duct becomes not only superfluous, but its artificial opening may do harm by allowing inflammatory products from the nose to come in contact with the wound.

Nervous Complications of Influenza.

Feinberg has reported, says the British Medical Journal, two cases of influenza in which nervous complications occurred: (1) A man, aged 38 years, on the eighth day after onset of influenza, was suddenly seized with severe pain in the back of neck, shoulders, upper part of chest, and right upper limb; there was complete loss of movement in the right arm and some paræsthesia over the whole of the affected part. There was no affection of cranial nerves. The pain lasted four months. On examination a year and a half later, there was marked wasting of the right upper limb, pectoral and trapezius muscles, and also of the sterno-mastoid. The right palpebral fissure and pupil were smaller than the left, and the right eye was shrunken, evidently owing to the communication of the sympathetic nerve with the first dorsal root. There was paralysis of the muscles supplied by the musculo-spiral and median nerves, and weakness of those supplied by the ulnar. Electrical reactions were much diminisned but there was no reaction of degeneration. The case was considered to be one of neuritis of the brachial plexus, toxic in origin, and due to the influenza. (2) A man, aged 40 years, five days after the onset of influenza, became suddenly delirious with loss of consciousness, trismus, rigidity of the neck which was slightly retracted, and some rigidity of the limbs. Delirium continued and became very wild; there were frequent tonic spasms of the limbs. After three days improvement began, consciousness returned, and in a few weeks the patient was quite well except for slight weakness of the right upper limb. The writer considers it almost certain that this was a case of hæmorrhagic encephalitis.

Ambroise Pare.

Dr. Banks, in his excellent and interesting address at the Montreal meeting of the British Medical Association, had this to say of this illustrious French surgeon:

Hundreds of years went past before there came upon the scene any military surgeon of note, but when he did appear he was a man of transcendent merit—the illustrious Ambroise Pare. From 1517 to 1590, for seventy-three years, he lived a long and incessantly active life, the contemporary of Vesalius, the immediate predecessor of Harvey. We have only time to glance at the soldier-surgeon side of Pare's life. For over thirty years he followed the wars under four kings of France—Henry the Second, Francis the Second, Charles the Ninth, and Henry the Third, with intervals of a few years at home in Paris. Perpignan, Metz, Verdun, Rheims, Hesdin (where he was taken prisoner and had to write to his wife for his ransom), St. Quintin, La Fere, Amiens, the taking of Rouen, Dreux, Moncontour—these are but some of the bloody battles and sieges at which he was present. Through them all his humanity, his love of his profession, his independent character, and his jovial, frank disposition carried him safe, and made for the son of the poor country joiner warm friends among the greatest and noblest warriors of France. Even that miserable monster, Charles the Ninth, loved the Huguenot surgeon, and when the awful day of St. Bartholomew came, Pare was spared to tend his wretched master through the brief term of agonised and remorseful life that was given him. The description in Dumas's novel, the *Two Dianas*, of the wound of the famous warrior, Duke of Guise, where the lance entered above the right eye and came out between the nucha and the left ear, breaking short off, and how Pare lugged it out, with the chance that when it did come, one terrible gush of blood would finish his illustrious patient's life and his own career at the same moment—the picture of all this is real history.

Amid all the splendid work, both anatomical and surgical, which Pare did, the application of the principle of the ligature to bleeding arteries is of course that with which his name will be forever associated. In this day of grace it is impossible for us to imagine the horrors that awaited a wretched man so soon as his limb was cut off and the process of stopping the bleeding

began. Think of the raw and exquisitely sensitive stump exposed to the red hot cautery or plunged into boiling pitch! For this frightful treatment Pare substituted the ligature, which in our own day, employed in the form of an aseptic animal material which the tissues quietly absorb, has practically reached the pitch of perfection. In his time, too, there was a fixed belief that the danger from gunshot wounds arose from the poison of the gunpowder conveyed on the bullet. To destroy this poison the treatment was to pour into the wound boiling oil in which elderwood bark had been stewed. On one occasion, not having this infernal concoction at hand, Pare used a cold mixture of yolk of egg, oil of roses, and turpentine to his wounded soldiers. He passed a sleepless night from dread that this would injure those to whom it had been applied, and his delight next day was proportionately great when he found that they had had but little pain, while their wounds were free from inflammation and swelling. This was his panacea for wounds ever afterwards. There are of course persons who wish to make out that he was not original in the matter of the ligature. He himself says this about it: "Taught me, as I interpret it, by the suggestion of some good Angel, for I neither learnt it of my masters nor of any other man. And thus I wish all chirurgions to doe. For it is not in our Art, as it is in civill affaires, that prescription, law, or authority should prevail over right reason." But these cavillers have doubtless never heard of an ancient proverb which says that there is nothing new under the sun. In spite of them the world will ever believe in a glorious trio—Pare, the Frenchman, who invented the ligature; Morton, the American, who discovered anæsthetics, and Lister, the Englishman, who introduced antiseptics. In the fullness of years, possessed of affluence and surrounded by friends died Pare, the whilom poor barber-chirurgeon, now a Councillor of State and Surgeon-in-Chief to the King. One final touch will perhaps reveal a sentiment that permeated and guided his every labour. On one occasion, after the successful treatment of a wounded officer, he made this wise and reverent remark, afterwards adopted as his motto: "*Je le pansay; Dieu le guarist*"—I treated him; God cured him.

Treatment of Uræmic Dyspnœa by Ether.

Gallois has recently made a series of observations on this subject. Being rapidly eliminated, ether may be given in fairly large doses at a time without any danger of intoxication, and owing to this fact its employment under various conditions has been recommended. In case of uræmia with grave dyspnœa 2 c.cm. of ether were injected night and day, as well as a dessertspoonful by the mouth in syrup between each injection. The injections must be made deeply in order to avoid necrosis of the skin. It will be seen from this that a considerable amount of the drug is given, and to this are attributed the good results obtained. A rapid and appreciable improvement is observed; respiration becomes much easier, the sensation of choking disappears, and sleep becomes possible. At the end of a few hours diuresis increases. The patients themselves become so sensible of the beneficial action of ether that they look forward with eagerness to the injections, notwithstanding their somewhat painful character. This treatment must be continued for several days, according to the severity of the case, and as a rule the interval between the injections is increased according as the dyspnœa improves. The drug may be discontinued in a week or so if diuresis have become regular. Much of course depends on the amount of renal tissue available, for in those cases where the kidneys are severely diseased it is as apt to fail as any other method of treatment. The important point is the amount which it is necessary to give. This may vary from 60 to 96 c.cm. in the twenty-four hours, and the rapid absorption resulting from subcutaneous injection is of importance. This method differs markedly from the small doses of ether given on sugar and recommended by Eichhorst. Dr. Gallois has also studied the question experimentally, for he found that after producing dyspnœa in an animal respiration became much more regular on giving a certain quantity of ether. He further finds that the drug produces no injurious effect on the kidney, nor does it aggravate any existing lesion.

Milky Blood Serum.

Dr. Castaigue, in the Dublin Journal of Medical Sciences, states that he has examined the clinical conditions under which the blood serum is turbid or milky in appearance. This phenomenon has long been known, but from the recent introduction of serum diagnosis it now acquires fresh interest. The turbidity may be considered in two categories: (1) When it is due to fatty particles; (2) when it is not due to suspended fat, but to molecular albumen. The fatty form is extremely rare, and it is with the second category that the author deals. The lactescence may be physiological, and

occur in healthy persons after a meal, without there being albuminuria. The author lays great stress on the association of pathological lactescence of the blood serum with epithelial changes in the kidney. In acute diseases, such as typhoid or pneumonia, the blood serum may be milky, whether there be albuminuria or not, but whenever a necropsy was obtained in these cases there were lesions of the renal epithelium. In 35 cases of acute disease the serum was lactescent in 8, and of these latter 4 were examined *post mortem*, and showed exclusively epithelial changes in the kidneys. In 7 cases of subacute nephritis, 4 showed lactescent blood serum, while in the remaining 3, in which the blood serum was limpid, 2 were examined *post mortem*, and showed changes in the connective tissue of the kidneys. In 18 cases of chronic nephritis, the blood serum was clear in all. He concludes that when the serum is lactescent in the course of nephritis there is a complete absence of arterial or fibrotic change in the kidneys.

A New Method of Performing Lumbar Nephropexy.

Jonnesco, according to the British Medical Journal, holds that no method of nephropexy can be regarded as satisfactory unless, in addition to its freedom from danger, it permits the whole length of the kidney to be secured in the lumbar wound, and causes as little disturbance as possible of the renal parenchyma. Whilst the methods hitherto practised fulfill the first condition, having been attended by a mortality of not more than 1 per cent., they are, in the author's opinion, more or less objectionable by reason of their leaving but a small extent of the surface of the kidney fixed to the abdominal wall, and also of the retention of the deep sutures, which though they did not become septic, are liable to cause severe and persistent pain, and excite the slow formation of scar tissue in the substance of the kidney. The operation described, which has been performed by the author with good results in 10 cases, is intended (1) to fix in the lumbar region the whole length of the outer surface of the kidney, so that there may be no abnormal bending of any portion of the organ and consequent obstruction to the flow of urine; (2) to increase the strength and the extent of the adhesions by passing the deep sutures under the periosteum of the twelfth rib, or, if this bone be very short, under that of the eleventh rib; (3) to leave the deep sutures in place only for such time as may be required for the formation of adhesions between the kidney and the margins of the wound. The author exposes the kidney by an oblique incision made just below the last rib. After removal of a large portion of the perirenal fat, and incision and partial separation from the renal structure of the fibrous capsule along the outer surface of the kidney, this organ and its capsule, together with all the soft parts on either side of the lumbar wound, and the periosteum of the twelfth or eleventh ribs are traversed by two or three double sutures which are secured by being tied over rolls of gauze. In a recent modification of this operation two deep metallic sutures are used. The margins of the external wound are finally brought together by fine sutures of silk or catgut. The removal of the deep sutures is usually effected about the tenth day. This seems to be really the main point of difference between this and other recent methods of nephropexy.

The High-Altitude Treatment of Tuberculosis.

Dr. Van Ziemssen presented a paper with the above title to the Twelfth International Medical Congress. He said:

Looking back over the history of tuberculosis, we see a motley conglomeration of methods of treatment, for during the present century almost every year has brought with it a new remedy. All these have now been discarded, and but two agents remain to be considered, namely, tuberculin and climate. In regard to the first, the "specific" treatment, there is little to say. Koch's old tuberculin has been forgotten, the value of the new has not yet been proven, and most people already doubt its efficacy. In speaking of tuberculosis, he said, he meant particularly pulmonary tuberculosis; other forms, such as lupus, have without doubt been cured, but for the pulmonary form, the most frequent and therefore the most serious, nothing really has been done. The complexity of the lesions make a cure by means of a specific seemingly impossible. Other forms have their specifics, for tuberculin will often cure lupus, and iodoform will cure tuberculosis of the joints, but as yet we have no specific for tuberculosis of the lungs. There remains therefore only the climatic treatment. As far back as we can see in the history of medicine fresh air has been one of the requirements in the treatment of tuberculosis, but it is only of late that the advantage of high altitudes, at least for many cases has been clearly demonstrated. That tuberculous patients can get a quantity of fresh, pure air in these

regions is evident to any one visiting the places. On the mountains in the centre of Europe, mountains covered with snow during the entire winter, one can see patients sitting in the sun drinking their morning coffee, with snow all around them, yet the sunbeams are so warm and pleasant that they are perfectly comfortable. But the fresh air that surrounds them is not all; the altitude brings about an excitation of the blood-making organs that increases the corpuscular elements in the blood. Even in health this reaction takes place, but not so markedly as in diseased states. There are contra-indications to high altitudes which prevent us from sending all patients there. A tuberculous patient with fever should never be sent to a height, for he will certainly become worse and the fever will be increased. Almost always patients without fever do well, though they sometimes find it difficult at first to acclimatize themselves. If the fever is due wholly to the presence of bronchitis or pleurisy, it does not act as a contra-indication.

The best results are obtained when the patient is sent to a place near his own home, for a long journey is always depressing, and the comfort of seeing friends, especially to a sick man, is very great. The stage of the disease must be taken into account in deciding this matter. If the case is much advanced, the patient should be kept as near home as possible.

The speaker took up the subject of sanatorium treatment for the poor. He feared the number of the rich is too few to build sanatoria for all the world, but that should not paralyze all effort, for every case cured and every case isolated are steps toward the conquest of the disease. "

Diagnosis of Diabetes from Stained Specimens of the Blood.

Bremer describes a simpler method than the one which he originally proposed. (British Medical Journal). A drop of blood is spread over a third or half a slide, and is then exposed to a temperature of about 135 deg. C. for six to ten minutes. A temperature of 140 deg. should not be exceeded. When the thermometer registers 130 deg. the gas flame should be taken away from the oven. The optimum of temperature lies about 135 deg., and below 229 deg. the test becomes unreliable. The slides are then placed in suitable dishes containing the stain. A control specimen must always be made. The eosin methylene blue preparation first used by the author is difficult to make and unreliable. Congo red, methylene blue, Biebrich scarlet and the Ehrlich-Biondi stain all give excellent results. The first three are used in 1 per cent. watery solution. After an exposure of one and a-half to two minutes to Congo red the diabetic blood is either not stained at all or only indifferently so, while the non-diabetic blood is coloured red. Methylene blue acts in an analogous way, but Biebrich scarlet stains the diabetic but not the non-diabetic blood. Ehrlich-Biondi's stain colours diabetic blood orange and-diabetic blood intensely violet. Very successful specimens can be made if a contrast stain is used. Thus, specimens may be stained with a 1 per cent. watery methyl green for one and a-half to two minutes, when both specimens appear green, but especially the diabetic blood. The counter stain is a 1 per cent, watery eosin applied for eight to ten seconds. The diabetic blood remains green but the non-diabetic stains red. Many other stains are mentioned, but the results obtained with them are not so good. The specimen may be taken out of the stain so that the staining can be controlled. Rapid washing and then drying are desirable. Whether the difference in reaction is due to the different alkalinity of the blood must still remain an open question.

Homeopathy.

Is the fact that homeopathy, or similia similibus curantur, treatment is not popular south of Mason and Dixon's line a recommendation to that school of medicine? A small fire may be extinguished by a very small stream of water, or no stream at all, but a large fire requires a large stream of water to extinguish it. My clinical experience in the treatment of diseases south of said line, is that it required heroic doses of medicine to affect diseases favorably. North of said line the diseases are much milder in their type, hence many of them will recover with only proper diet and good nursing. This is the reason that homeopathy makes such inroads in practice in the north. Their so-called drugs are palatable and easily taken. When the disease is self-limited they to the laity appear to do good, but when cases do occur under their observation that require heroic treatment we think they resort to remedies used by the regulars. We have no objection to them using our remedies, but we do have objection when they prescribe them under the guise of homeopathic. We hope ere long that all pathies will be swallowed up in one homeogenous school known as scientific medicine. The advances the regulars have made and

are making along that line inspires us to the belief that this hope may soon be realized.

Past and Present Views as to the Actions of Medicines.

Dr. D. J. Leech (British Medical Association, Sept. 1, 1897) said that comparatively little attention has been given in England in recent years to the cultivation of knowledge concerning the method in which remedial agents act. In most countries, however, a constantly increasing interest is being shown in determining, not only the action of remedies, but the mode of their action. The establishment on this side of the Atlantic of that admirable periodical *The Journal of Experimental Medicine*, in which Pharmacology takes its place with Physiology, Pathology, and Medicine, is a valuable sign of this interest, and my great pleasure at being honored with the office of President of this Section is heightened by the feeling that by its constitution on this occasion evidence is given of the appreciation of the scientific as well as the practical side of therapeutics in this country.

"The discoveries made concerning the curative influence of certain animal substances, such as thyroid gland, and concerning toxins and antitoxins, mark a new departure in therapeutics. Dr. Saundby considers that though the recent discoveries with regard to pathogenic organisms and their products open up to us an altogether new prospect in therapeutics, the system of pharmacology is about to pass into the limbo of the forgotten, and Professor Behring of Marburg thinks that in the light of serum treatment all our older views must vanish. Cellular pathology, he says, has become unfruitful for therapeutics; it is vain to treat the organs which are affected. Serum treatment, if we may judge from the *resume* of his paper, which was read at the recent *Congress fur innere Medicin* at Berlin, is alone efficient. If Behring's view as to its nature is correct, its study is almost outside the boundaries of pharmacology, for he holds that antitoxin is not a definit chemical compound, but a *quality*, inherent in certain albuminous substances as magnetism is in the magnetic oxid of iron. If antitoxins are powers, not substances, we are almost carried into a new world in which pharmacology, as at present understood, has no place. There seems probability that the view of the enthusiastic supporter of serum treatment has any real foundation, and as I do not know the reasoning which has led to its adoption I shall not attempt to controvert it. The general bearing, however, of treatment by animal substances on our ideas as to the methods in which medicines act is worthy of consideration. My contention is that the new discoveries, while extending the domain of pharmacology, are in no way opposed to its long-established teachings; that the various animal substances act on the same lines as the older remedies, though they possess certain properties which are wanting, or less apparent, in the older drugs, and that even if the most sanguine expectations of their powers are fully borne out, the utility of the pharmacologic knowledge already acquired will not be lessened.

"Concerning the action of thyroid and allied substances I need say but little. Physiologic and pathologic investigations indicate that the ductless glands, and even those which furnish excretions, supply some material which passes into the blood; and it is just possible that other tissues do the same. These internal secretions are probably necessary for the chemic transformation of other substances in various parts of the system, and if the supply be defective certain ailments result. By giving thyroid gland we can certainly remove the effects due to an insufficient supply of its secretions, and reason has been given for believing that several other animal substances and their extracts yield, when given internally, malerial wanting in the blood, and thus prove of advantage in some diseases. But we have here no new pharmacologic principle. The administration of a remedy for the purpose of adding something to the blood, which is not present in suffieient quantity, is not a departure from ordinary pharmacologic ideas.

"The effect of toxins and antitoxins requires to be more fully dealt with, but before comparing their action with that of other medicinal substances, let me point out opinions formed during late years with regard to the action of the latter. In the first place, it has become clear that for the changes in functions or tissues we must chiefly look to the effects produced by drugs on the ultimate tissue elements, or cell protoplasms, and Schmiedeberg long ago pointed out that this influence is probably to same extent molecular. The presence of molecules of elements or chemic compounds seems to produce some effect on those of the protoplasm which leads to change in the function of the tissues into which the protoplasm enters. It is quite possible that pharmacologic agents may likewise influence chemic processes in the protoplasm without themselves being changed, but

however this may be, it seems clear that the primary effect of remedial agents is exerted through their influence on cell-protoplasm, the nutritional processes of which are altered, with the result that the tissues into which the protoplasm enters are altered in fuction.

"In some instances their continued contact seems to give rise to further changes; something occurs which causes the drug molecules to lose their usual influence, and tolerance of, or immunity to the drug is produced. How far this immunizing effect of drugs extend we do not know. It seems to occur in certain people only in the case of arsenic, The alkaloid morphin is the best example of it, but it has been shown by Ehrlich to be produced by the two vegetable albuminoid substances, ricin and abrin. On the cause of immunization we can only speculate. The cell protoplasm may, owing to some alteration in its functions, expel the drug with unwonted quickness, or it may destroy it; but it seems more likely that some change takes place in the nutrition of the cell which renders it insusceptible to the influence which under normal conditions alter its functions.

"Turning now to the toxins, it may be noted that they disturb the functions of the various organs like other pharmacologic agents. They have a definite physiologic action, and there is no reason for believing that they act on tissues in a manner fundamentally different from other medicinal agents. They have, indeed, a more marked power than most drugs in producing immunity. It is impossible to say whether in this respect they act like ordinary drugs, but it can hardly be doubted that they produce their effects in a similar, if not in the same way.

"A third property which toxins have has not been shown to be common to the medicinal agents hitherto employed. They lead to the production of antitoxins, but how, we know not. Protoplasm has the power of altering substances which come in contact with it, and it is possible to imagine that by some subtle chemic influence the toxin is converted into a substance directly antagonistic to it in physiologic properties. But it seems far more probable that antitoxins are produced by the protoplasm itself, under the influence which the toxin exerts upon it. It is shown that the serum of blood does contain a bactericidal substance, and many years ago Hankin pointed out that the blood of certain animals normally contain what he called a 'defensive proteid,' to which Buchner subsequently gave the name of 'alexin,' and which practically is an antitoxin. If cell protoplasm has the property of thus normally producing such defensive material, it is not difficult to imagine that under the influence of certain toxins it may produce special antitoxins.

"The methods in which antitoxins act is as yet shrouded in obscurity. There is no reason for believing that their effects are produced in a manner different in kind from those of other drugs. The action, then, of the new animal substances seems not dissimilar from that of our older remedies."

The Prognostic Value of Urinary Chlorides.

Maignan has recently published a series of observations on the quantitative estimation of urinary chlorides in chronic diseases. In health an adult excretes 10 to 15 grammes of chloride of sodium per diem. In certain diseased conditions this figure may fall to 3, or even none, and the author made a special series of observations on the quantity excreted in tuberculosis, and found that the figures varied from 2.5 to 3.5 grammes, but the same thing may be found in chronic gastritis, gastric ulcer or gastric carcinoma, and in certain acute conditions, such as pneumonia or broncho-pneumonia. As regards acute diseases the reduction of chloride is of no prognostic value, and may even be compared to that reduction found in copious diarrhœa or under certain dietetic conditions, and the diminution is often in proportion to the intensity of the disease. It is therefore quite different in chronic diseases, and the progressive diminution of chlorides (when unconnected with special diet) is often of grave prognosis.

Students of medicine who are planning to take up study in one of the colleges in Louisville, Ky., during the coming year will be glad to learn that the Young Men's Christian Association, through their College Department, are planning for special features that will be of interest to college men. The College Department will be able to help students find good places to board, and room, and, besides the usual features in the way of receptions and entertainments, the privileges in the Central Department building, including a new magnificent swimming pool, will be placed at the disposal of students who do not live in Louisville for a nominal fee, which can be paid after examination of the privileges mentioned. Particulars as to board, room, and other matters, can be secured by addressing the College Secretary, Mr. E. A. Forbes, No. 318 W. Broadway, Louisville, Ky.

Drugs which Should not be Employed during Pregnancy.

Boissard says that all therapeutical intervention should be incriminated when it is followed by abortion or premature labor. Emmenagogues,he says, should be banished from the treatment, not only of pregnant women, but in the case of those in whom there is a suspicion of the possibility of the beginning of pregnancy.

There are no abortive drugs in the strict sense of the word, but there are drugs which, given in toxic doses, may cause at the same time both abortion and the death of the woman; these drugs are therefore useless and inefficacious, and there is danger of poisoning to the woman.

With regard to the ecbolic and oxytocic drugs, they belong to another class, and have the property of arousing and aiding the progress of uterine contractility, or of strengthening the intensity of the uterine contractions after they have been aroused; the action of the latter is certain, that of the former doubtful.

The action of quinine sulphate and of sodium salicylate is not to provoke abortion or premature labor, that would be very much to be regretted, as obstetrical therapeutics would be deprived of two valuable drugs. Drugs that have that property may, however, be advantageously employed in cases of contraction of the pelvis, in which it is expressly indicated to interrupt the course of pregnancy.

The abortive or ecbolic action of quinine sulphate, has been discussed by many writers whose investigations and experiments show that this drug should not be considered as an abortive agent; in several cases in which there was contraction of the pelvis and it was necessary to interrupt the pregnancy, this drug was given every day in large doses without producing the least symptom of labor, yet it was given in amounts that, if not toxic, were at least sufficient to cause quinine intoxication.

There should be no hesitation in employing quinine sulphate during pregnancy whenever symptoms of malarial infection manifest themselves, and these cases are rather frequent, pregnancy serving to arouse in some way the previously dormant infection. It is the same with sodium salicylate; only ergot, because of its oxytocic properties, should be rejected, even in cases of hæmorrhages during pregnancy, in order not to cause tetanization of the uterine fibres.

Narcotic, analgetic, or anæsthetic drugs may be administered without fear when their employment is justified, and may be of great benefit to the parturient woman. The different preparations of belladonna and of stramonium may be employed, also antipyrine, opium, chloral, and chloroform or ether. In case of thheatening abortion, laudanum is admirably borne, and as much as a hundred drops, in enemata of boiled water, may be given during the twenty-four hours, twenty-five drops at a time being the amount used. It is the same also of chloral in vomiting, and of chloroform, which is employed during pregnancy to clear up the diagnosis and ascertain the exact configuration of the pelvic cavity, in order to reduce retroversion of the gravid uterus and to facilitate version by external means.

The different mercurial preparations, are administered, not only in cases of acknowledged syphilis, but also in doubtful and unacknowledged cases when the physician finds himself in the presence of a series of abortions or premature births of macerated infants.

Concerning the administration of purgatives, Boissard says that, under the pretext that in the beginning of pregnancy it is dangerous to use purgatives, some women reach an extraordinary condition of constipation which is much graver than the possibility of the danger they fear. In a general way it is of great advantage to keep the functions of the intestine in a good and regular condition by the use of castor oil, cascara, senna, and enemata of boiled water.

With regard to bathing, this favors the functions of all the organs, and particularly of the skin, aed pregnant women may and should take baths during pregnancy, one every fifteen or twenty days at the least, observing the following precautions: Not to bathe at a time corresponding to the last appearance of menstruation; not to allow the temperature of the bath to be above 96.4 deg. F.; not to remain in the bath longer than fifteen minutes, and to guard against taking cold on coming out of it.

Persistent Vomiting in Infants.

Dumat, according to the New York Medical Journal, believes that this condition is generally due, to catarrh of the stomach caused by the absorption, along with some article of diet, of microbes, which, breeding in the stomach produce an irritant ptomaine. Although the repeated emesis must get rid of much of the irritant, there always is enough left to continue the process.

The aim in treatment should be, not to soothe the gastric mucous membrane, as we

do with hydrocyanic acid and bismuth; not to simply neutralize the acid generally present, as we do with soda; not to counter-irritate over the epigastrium, as we do with mustard plasters; all very good remedies in their way, and often useful, but remedies which do not strike at the root of the matter. Our aim should be to wash out and disinfect the stomach.

It is Dumat's custom to order a large draught of warm water, which is generally brought up immediately, and then a mixture of creosote, which acts as an antiseptic and an anodyne to the gastric mucous membrane.

This plan is successful, but it would be better to wash out the stomach with an antiseptic first, and then give a simple anodyne to soothe the congestion which is likely to be left behind in the gastric mucous membrane.

He has employed with much success a weak solution of lactic acid of the strength of 1 in 240 for infants. The drug is mixed with glycerin in the proportion of four minims of the acid to a drachm of glycerin, and the nurse is instructed to mix a drachm of this solution with fifteen drachms of water. This can be flavored with orange-flower or peppermint water, and makes a not unpleasant drink. Anyhow, thirst being a prominent symptom, the patient readily swallows the two ounces of fluid, and promptly brings up most or all of it, along with a quantity of mucus. The dose is to be repeated within an hour or two. It is again thrown up, in all probability, but this time the washings are not so dirty; and the third and fourth times the washings, if they come up at all, are clean.

Then it is well to give a gastric anodyne, such as a mixture of hydrocyanic acid, bismuth, and chloroform water, and, when two or three doses of this have been retained, to allow a small quantity of broth, barley water, or albuminous water.

The Vertigo of Arterio-Sclerosis.

Cases of vertigo in elderly persons associated with vascular degenerative changes are very far from uncommon, and its presence may, according to Gourcon, furnish us with important therapeutic indications. He divides the cases into three classes.

1. Simple vertigo.
2. Vertigo with epileptiform attacks, and
3. Vertigo with a permanently slow pulse.

He admits, however, that these three types usually encroach upon one another. *Simple vertigo* may come on suddenly or be preceded by discomfort and buzzing in the head, and may even cause syncope. The attacks may be very frequent, or may be separated from one another by an interval of several days. The duration of each individual attack is very short, but it may terminate in death.

Vertigo with epileptiform attacks is less frequent, but should always suggest arterio-sclerosis when it comes on in middle life. Occasionally these attacks also are fatal.

The *vertigo with a slow pulse* and attacks either syncopal or epileptiform differ from the others only in the slowness of the pulse.

Gourcon regards the symptoms as being due to implication in the arterio-sclerotic process of the lower vessels of the medulla, causing a less abundant and less regular supply of blood to the nerve centres in that situation.

By way of *treatment* he recommends attention to the general health, strict regulation of the diet, and the administration of iodide of sodium and of nitro-glycerin, given together at first, but later on alternately—the iodide during twenty day of the month, and the nitro-glycerin on the remaining days.

He says, I would, however, advise great caution in the use of nitro-glycerin in these cases, at all events in commencing its use, as I have seen instances in which a dose as small as ♏ ii. of a 1 per cent. solution has brought about a state of collapse sufficiently serious to give rise to grave anxiety.

Tobacco Smoking in Disease.

Dr. Jankau in many cases regards moderate smoking as indicated, and especially where there is an express desire. In the majority of surgical affections it is permissible, with exception of convalescence from operations upon the bladder and abdomen. Patients with diseases of the eyes, nose, throat, or pharynx should never smoke. The internal diseases which would not permit smoking are peritonitis, typhoid fever, and similar affections. In stomach affections smoking may be allowed if the smoke be filtered. Patients with organic heart diseases should smoke as little as possible. In lung diseases, under certain circumstances, he would hold smoking to be indicated; also in syphilitics. In those with nervous diseases there is no general rule; sudden withdrawal often does harm, while in cardiac neuroses only a very weak tobacco with filtration of the smoke is allowable. To smoke in the sick-room where there are several patients present is hardly to be commended. The best time to smoke he would believe to be several hours after meals.

The Dangers of Artificial Respiration.

The most obvious thing to do, remarks the Lancet, when a patient fails to take air into his lungs while he is under the influence of an anæsthetic is to adopt some form of artificial respiration. In most cases the treatment is the correct one, but it must not be assumed that in every case in which the breathing stops artificial respiration is the first act to be performed. It is not free from danger; in more than one instance it has led to fracture of the ribs, owing to some excited assistant pressing too vigorously upon degenerated bones.

Reference to numerous cases in which foreign bodies have become engaged in the air-passages, and have been discovered only after futile efforts at artificial respiration had been abandoned. Not infrequently when abdominal section has to be performed to relieve intestinal obstruction there is a fatal tendency for the stercoraceous vomiting, which is so likely to occur during the operation, to result in matter being sucked back into the larynx. This is the great peril of the anæsthesia in such cases, and every instance of death under it is a warning.

The following case, which came under the observation of Mr. Cholmeley, of Wolverhampton, is cited as an illustration of this point: It appears that a man, aged 58 years, exhausted by disease, was to be operated upon to relieve obstruction, caused, as was found at the necropsy, by annular carcinomatous growth constricting the intestine at the ileo-cæcal valve. The general condition of the patient was very bad, and the operation had to be delayed by the patient's refusal to give his consent, so that at the time he was gived the anæsthetic his state was a grave one. He took the ether well. What degree of anæsthesia was obtained was not mentioned. In ten minutes, the abdomen being opened and the surgeon being engaged in handling the intestines to discover where the constriction was, the patient began to vomit. He became livid and a gurgling was heard in his trachea. Artificial respiration was resorted to for a short time without improving the man's condition, and then tracheotomy was rapidly performed. A quantity of stercoraceous vomit issued from the tracheal tube, and, although the artificial respiration was kept up, the man died.

There can be no doubt that in cases where it is certain that vomit has entered the lungs the first thing to do is, as was done in the present case, to perform tracheotomy and draw out with some pump all the fluid which can be got from the air-passages. Artificial respiration, when done by pressing upon the ribs and moving the arms, can only force the stercoraceous vomit iuto the finer bronchi and effectually cut off any chance of the patient's recovery. It has been suggested that preliminary washing out of the stomach lessens the risk of vomiting, but it is not at present certain how far this can be relied on as a safeguard, since as the stomach is emptied a renewed regurgitation from the intestines is apt to occur. It seems probable that the inevitable manipulation of the intestines induces the reversed peristalsis which culminates in vomiting. Were this danger considered imminent it might justify a preliminary opening of the trachea and plugging above the tracheotomy tube, so as to effectually shut it off from the pharyngeal space. Whether such a procedure would increase too much the peril of the case experience alone can decide.

A Research Upon Anesthesia.

Drs. Wood and Carter, in the Journal of Experimental Medicine, record their researches as follows:

1. Lowered arterial pressure has a comparatively feeble effect upon the respiration, but when the pressure falls sufficiently, respiratory depression does occur.

2. Even excessive lowering of blood-pressure primarily stimulates the vaso-motor centre, the sensibility of the center being evidently necessary to the automatic regulation of the circulation.

3. The circulation recovers itself more slowly after profound etherization than after a like chloroform narcosis.

4, It is possible for ether as well as chloroform to produce death some hours after the cessation of its administration, at a time when the cerebrum has long freed itself from distinct evidences of the narcotic, so that consciousness and intellectual action have been restored.

In apylying these conclusions to the subject of practical anesthesia it is evident that the depression of the circulation produced by chloroform has effect upon the respiratory centres only when the pressure has fallen very low, and whilst it may be a factor in the production of respiratory failure during chloroformization, the failure must be chiefly due to the direct influence exercised by the drug upon the respiratory centres.

Clinical experience shows that nausea and general depression are more pronounced after the use of ether than after the use of chloroform, a difference which is strongly insisted upon by the advocates of chloro-

form as an important agent in favor of that anesthetic. Our research confirms clinical observation, and experimentally shows that the depression of the circulation produced by ether is more permanent than that caused by chloroform, the reason probably being the large amount of ether which is necessary to produce profound narcosis, with lowering of the arterial pressure—an amount so large that it can neither be burned up in the system nor yet eliminated in the time which would be necessary for the much smaller amount of chloroform to be gotten rid of after chloroformization.

Causes of Retroversion and Retroflexion of the Uterus.

Schultze, at the Seventh Congress of German Gynecologists, gave the following as the causes of these displacements of the uterus:

1. The relaxation of the supporting apparatus of the uterus, principally the retractor uteri of Luschka, the muscles in front of the broad ligament, the round ligaments, and the fasciæ. This relaxation may be due to (*a*) pregnancy and the puerperal state; (*b*) posterior parametritis in the course of absorption; (*c*) habitual state of repletion of the rectum; (*d*) prolonged dorsal decubitus, and especially the action of the abdominal pressure in this position.

2. Fixation of the cervix in a more anterior position than normal: (*a*) by cicatricial bands resulting from anterior parametritis; (*b*) by bands arising from extensive lacerations of the neck of the uterus, or supervening after bilateral notching or other operations, performed on the uterus without necessary precautions; (*c*) by cicatricial bands due to loss of substance by gangrene in front of the cervix or to the existence of vesico-vaginal or vesico-uterine fistulæ.

3. Abnormal shortness of the vagina, more especially its anterior wall; (*a*) as a result of arrest of development in childhood; (*b*) as a result of senile atrophy.

4. Habitual state of fulness or extreme distention of the bladder.

5. Distention of the vulva, and laceration of the perineum.

These five etiologic conditions are the most frequent. If several of them coexist, their action is naturally increased. Other less important causes are abnormal length of the cervix, the presence of a tumor of the uterus or of the cervix, abnormal situation of an ovary or a tumor of the same.

The following prophylactic measures are indicated:

Excessive distention of the bladder should be avoided in children and young girls. To avoid parametritis, a light aseptic bandage should be worn during the menstrual period by those predisposed to uterine catarrh. Lacerations of the perineum, however small, should be repaired as soon after delivery as possible, in order to avoid distention of the anterior vaginal wall. Careful attention must be paid to regular evacuations of the bowels during the puerperal state and afterward. If subinvolution of the uterus progresses too slowly, ergot or ergotin should be administered.

The diagnosis of retroflection is in most cases easily made by manual palpation, but in order to recognize exactly all the complications and especially the obstacles to reduction, anesthesia is desirable.

The non-operative treatment of retroflexion consists in reduction of the displaced organs. If no adhesions are present nor any other complication, a pessary should be at once introduced. Celluloid pessaries are most to be recommended, and their shape ought to be adapted to each particular case. A pessary should never be introduced unless reduction is perfect, a rule which unfortunately is often broken. During the first days the pessary should be carefully watched and changed if it does not accomplish its object. To favor the action of the pessary, and to obtain if possible a permanent cure, cold enemata are to be taken daily after each movement of the bowels and ergot during the menstrual flow. In certain cases massage and electricity may be added to the treatment by the pessaries. Although the most favorable results are obtained in recent cases, those of long standing do equally well if the patient has borne a child or has had a miscarriage a short time before commencing treatment.

The most frequent complications are subinvolution of the uterus, metritis, endometritis, and oophoritis. These complications, if they have not existed too long, often disappear rapidly after reduction of the displacement.

The obstacles to reduction must be carefully made out during narcosis by recto-vaginal and abdominal palpation. The obstacles often depend upon a prolapsed ovary, adhesions of the posterior surface of the uterus to intestinal coils or to the rectum, or cicatricial bands occupying the parametrium, the peritoneum or both. If these obstructions cannot be overcome, during narcosis, the abdominal cavity should be opened and the adhesions divided.

The Princess Frederick Leopold of Prussia is undergoing a regular course of training as a hospital and field nurse.

Ureteral Stones.

Dr. Loyd, at the British Medical Association, Sept. 3d, 1897, presented a communication on stone in the ureter and its treatment. (Medical Record). He was struck some ten years ago, when work in renal surgery began, by the number of failures in discovering renal calculi. It happened in the hands of many men that in patients who presented all the symptoms of renal calculi none was found. Some had gone so far as to remove the kidney, and then had found no stone. In some of these cases the speaker was sure the condition was one of stone in the ureter. He reported the case of a man who had suffered from typical symptoms of renal calculus for three and a half years, An operation was performed, but no stone was found. Forty-five days later the patient was seized with acute pain which lasted a few seconds and then disappeared. In five or six hours a calculus was passed. In his next patient suffering in this way he resorted to the expedient, which he considered of great importance, of giving the patient a sudden very strong blow over the suspected site of the stone. This hurts only for a moment, causing a stabbing pain, very characteristic of stone. This patient, besides paroxysmal nephralgia, had shooting pains about the lower abdomen and hips. Hæmaturia was present. There was absence of kidney tenderness. His first step in diagnosis was to examine the bladder to determine that there was no stone there. The urine should be examined microscopically for blood. Then a group of symptoms should be looked for which are always associated with what he called "water-logged kidney." a "urotoxæmia" The patient looks excessively ill. The skin is moist, the pulse rapid (160 to 180), and the temperature is subnormal. There is abdominal distention caused by paresis of the intestines and the distress is extreme. He had been called in consultation to see a man by his physician, who stated that a curious condition was present—that the heart and lungs seemed to be much crowded upward, and he was unable to tell why. The man on inquiry gave a history of stone, and had left lumbar colic. This gave a clew. The ureter had become impacted and water-logged kidney was present, as indicated by one of its typical signs, viz., intestinal distention, which accounted for the crowding up of the thoracic viscera. Aspiration was done to relieve the distention. At the autopsy the pelvis of the kidney and the ureter were much dilated. Lumbar nephralgia with localized tenderness pointed to the position of the stone. Most cases of impacted stone would be found within the lower three inches of the ureter. The treatment in these cases was to cut for the stone, the sooner the better. If it was located near the bladder a suprapubic cystotomy gave the best results. The bladder should be opened, the ureter split up, and the stone extracted.

Treatment of Cystitis in the Female.

Bloom, in the Polyclinic, states that in the treatment of cystitis, if acute, we should put the patient to bed at once. This is the first essential in the management of such a condition. The diet should be light and unstimulating—fluid, milk, broths, and eggs. Avoid all stimulants; keep the bowels freely open with salines; keep the patient warmly clad. If the urine is acid, it should be rendered neutral by alkaline drinks such as Vichy water with plenty of soda in it.

In nearly all these cases the water is alkaline, though not as frequently in acute as in chronic cystitis. The best agent for neutralizing an alkaline urine is benzoic acid, either in solution well diluted with water, or in five-grain capsules, which are preferable, every three hours until the desired effect is obtained. Use large draughts of water after each capsule. Salol, in five-grain capsules every two hours, until the water is acid, is most valuable where there is much ammoniacal decomposition.

Boric acid ten to twenty grains in cinnamon water every three hours soon corrects offensive urine. For pain, which is often a prominent symptom, there seems to be nothing better than five-grain doses of acetanilid repeated as indicated.

Irrigation of the bladder becomes a most important adjunct in the successful management of these cases; of course, if it is acute cystitis, not until after the acute symptoms have subsided. One of the best irrigations for this purpose is potassium permanganate in one-twelfth- to one-fourth-per-cent. solution. Another very good one is one-half-per-cent. solution of acetanilid. In chronic cystitis this is one of the most valuable solutions that can be used. It can be increased in strength if found necessary.

The technique of vesical irrigation is most important. The apparatus is very simple, consisting of a soft rubber catheter joined to a piece of rubber tubing by a short piece of glass tube. A small glass funnel is connected with the other end of the rubber tube. The whole apparatus can be from four to five feet long.

Sterilization is most important before using it and immediately afterwards. Up-

on thorough cleanliness depends largely the successful issue of the case. Asepsis and antisepsis are as important in this operation as they would be were one about to open the abdomen. After carefully cleansing the meatus urinarius as well as its immediate surroundings, the catheter, well lubricated with sterilized vaseline, is introduced, the urine drawn off while the instrument is still in place, and the tubing filled with the column of urine, thus preventing the entrance of air; the funnel is filled with the irrigating solution and gradually raised, distending the bladder slowly. The quantity used will depend upon the vesical irritability. Some bladders will not tolerate over an ounce; the maximum quantity should not exceed five ounces. The funnel is then lowered and the bladder evacuated in the same careful manner.

This procedure is repeated till the washings come away perfectly clear and clean. The temperature of the solution should be about 100 deg. or 105 deg. F.

We use this once a day at first, or at most twice a day, and after a few days lessen the frequency. Even this may fail in certain bladders to cure the trouble; then one will have recourse to drainage, keeping the bladder empty by a self-retaining catheter. This is proceeded to by first dilating the urethra to the point of paralyzing the vesical sphincter.

If this fails, Emmet's operation becomes necessary for draining the bladder through the formation of a vesico-vaginal fistula.

If the vesical irritability is due to caruncle, the only permanent relief is total extirpation under careful antiseptic precautions. If due to fissure, or ulcer, dilatations of urethra, curettage, and the application of carbolic acid or silver nitrate, always being careful to draw the water through a sterilized catheter for several days, will meet with success.

In the treatment of gonorrheal vesical irritability nothing seems to do more good than the application of pure ichthyol to the urethra after carefully cleansing it with a solution of mercury bichloride, and giving internally a capsule of two grains of ichthyol and five minims of oil of sandalwood every three hours, and one or the other prescriptions mentioned.

In chronic cystitis it is important to look after the general health, as well as the local treatment, and if it is, as is often found, associated with a retroversion, the success will be very much greater if the uterus is restored to its normal position.

The door of the temple of fame opens both ways.

The Danger of Chlorate of Potassium.

Prof. Hare, in the Therapeutic Gazette, editorially says:

For many years the medical profession, with but little knowledge of the pathological conditions connected with diphtheritic infection, and with still less information in regard to the influence of chlorate of potassium upon the human body, were in the habit of employing this drug in large quantities in the treatment of diphtheria, some using it because it was supposed to exercise a favorable influence upon the local diphtheritic process, both when it was swallowed and when it was eliminated by means of the salivary glands; others, still more ignorant of its influences, employed it with the ridiculous idea that it was capable of yielding oxygen to the body and so supporting the system; while still others believed that the additional oxygen which it gave forth actually aided in the elimination of the effete products of the disease and thereby enabled the patient to resist its ravages. With our increased knowledge concerning the bacillus of diphtheria and the pathological changes which its toxins produce in the body, this method of treatment became less and less popular, and finally, when the profession grasped the idea that chlorate of potassium was not the innocent drug that it was thought to be, its use in diphtheria became still more limited. We have reason to believe, however, that there are still quite a number of physicians who continue to employ it either as a matter of routine practise or because they are unaware of its deleterious influences. The literature of medicine will be found to contain as each year goes by more and more cases in which the abuse of this remedy produces poisonous influences in the body, which are recognized to-day, although put down to other causes years ago. The object of this note is to insist upon the fact that the chlorate of potassium is, next to the cyanide of potassium, the most poisonous of the potassium salts. As an instance of this we may quote a case which recently occurred in Vienna, in which a boy of sixteen who was suffering from sore throat was given a gargle consisting entirely of chlorate of potassium. Either because of misunderstanding of the orders or through inadvertence the patient swallowed a considerable amount of the drug and death speedily resulted, the inquest revealing all of the usual signs of death from this substance.

In Great Britain there is one medical school to about 2,300,000 of population; in this country there is one to 2,110,000.

Physiological Effects of Castration in Women.

With regard to the sexual appetite, after removal of the ovaries it persists in 26 per cent., and is either diminished or abolished in 74 per cent. After removal of both the uterus and ovaries, appetite is more frequently lost than when the uterus is left, while after removal of the uterus alone, the ovaries remaining, the appetite is still lost in about 25 per cent. of cases. It should be stated, however, that the figures with regard to uterine castration are based upon 11 cases only.

Removal of the ovaries arrests menstruation immediately in only 62 per cent. of cases; 20 per cent. menstruate irregularly during the first 12 months, while in 17·5 per cent. of cases menstruation continues. and may be even profuse and intractable. The cases in which mentruation persists he explains by the supposition that the removal of the ovaries was incomplete. After removal of the uterus, menstruation is very rare, but several cases have been recorded in which a periodic loss occurred after hysterectomy, and in these cases it is probable that a portion of the tube has remained in communication with the vagina, Wendeler has recorded a case of hysterectomy in which pregnancy afterwards occurred in the stump of a tube which had remained permeable.

The following formidable list of functional disturbances may be met with after castration: (1) flushings; (2) loss of memory; (3) neurasthenic symptoms; (4) alterations of character; (5) congestive and hæmorrhagic phenomena (epistaxis, hæmoptysis, etc.); (6) disturbances of nutrition; (7) disturbances of the special sense organs; (8) mental troubles. These disturbances are constantly met with after ovarian castration, although they vary much in severity in different cases. After removal of the uterus alone, on the other hand, they are very rarely met with, and never become really severe. It seems therefore clear that they are due to the absence of the ovaries, rather than to the suppression of menstruation, a fact which only seems explicable by the theory that there is an internal ovarian secretion, which plays an important part in the nutrition of the nervous system. The only treatment which offers any chance of relief is the administration of ovarian extract. Both ovaries should never be removed except in cases of organic disease, which renders castration absolutely necessary.

Crossed Hemiplegia.

Dr. J. E. Graham of Toronto, reported at the Montreal meeting of the British Medical Association a case of crossed hemiplegia, the result of injury of the pons Varolii, which came under his observation five years ago. The history taken at that time was as follows: A. L——, aged ten years, was perfectly well. When eighteen months old, fell, while playing, and a slender jagged end of a spruce stick, about two feet long, entered the mouth and penetrated the soft palate. In the fall, the stick broke off at the line of the teeth and was so firmly embedded in the tissue that it had to be moved from side to side and much force used before it could be drawn out. The sliver measured between three and four inches. Profuse hemorrhage followed. The accident occurred at 5 P. M. and the patient cried until 11 P. M., when vomiting of clotted blood commenced and immediately after vomiting convulsions set in which lasted two hours. A second series of convulsions similar to the first, but shorter in duration, came on the next day. On the third night he had a third convulsive attack and during the afternoon a fourth. The latter was followed by pain, which continued till morning, when paralysis of the right arm and right leg was noticed with affection of the left side of the face. The left eye was turned slightly inward and the pupil was contracted. He swallowed liquids with difficulty. No solid food was given. He vomited occasionally for two weeks and remained in bed for seven months, Since the recovery of his strength, he had had convulsions, at first several in a day, but latterly less frequent. The series would often last seven or eight hours. Latterly they have been only ten or fifteen minutes and sometimes five minutes in duration. For the last five years they have occurred at night and are more frequent during the fall of each year. Constipation seems to bring on the convulsions. His mind is always clear, but he is not as bright as other boys. The affected side is always colder than the other and the right hand, which is rigid during the day, becomes flaccid at night. On examination in 1892 the right chest was one and three-quarter inches smaller than the left, while the circumference of the right arm, forearm, thigh, and leg averaged about one inch less than the corresponding parts of the left side. The face was drawn slightly to the left. No motion of the muscles of the right forearm was possible except slight additional flexion of the fingers, which were always considerably flexed and could not be exten-

ded by ordinary force. Motion of all the muscles of the humeral region could be made with some awkwardness. In the lower extremity all the muscles seemed capable of motion, but the foot was capable of only about half the normal flexion on the leg. The patient had an awkward limp which seemed due in part to the loss of motion in the ankle-joint and in part to lessened general power over the muscles of the joint. The patellar reflex was less on the right than on the left side. Ankle clonus was absent, also the cremasteric reflex. The condition present now differs very little from that of five years ago, except that now there is no squint.

Injections of Iodoform Into and Around Tubercular Joints.

Dr. G. Barling states (Treatment) that the positive demonstration that many of the so-called strumous lesions coming under the care of the surgeon are really tubercular seems for a time to have upset the minds of some surgeons. They preached a crusade of extremely active treatment of many of these lesion, and especially of tubercular joints; indeed, they wrote and spoke as though tubercular joints were little more amenable to measures, other than operative, than malignant disease itself. Now that the new name for the old disease has become more familiar, we are able once again to recognize that tubercular joint disease is as a rule very amenable to treatment, and that the great principles of rest and immobilization, thoroughly carried out, bring patients through their troubles safely—often with practically healed joints. Whilst this is generally so, it happens in a certain number of cases, either from want of rest or from feeble tissue resistance in the patient, that the disease is progressive, and some supplementary treatment is needed to hinder its progress and to obviate the necessity of future excision or amputation. It is impossible here to discuss the many remedies which have been advocated. Dr. Barling proposes to deal with one only, of which he has now had several years' experience without any drawback, and from which in some cases he has seen very great advantage.

The remedy of which he refers is iodoform, injected into or around the affected joint. He has now discarded ether and olive oil as the vehicle for solution or suspension, and always uses glycerin, with a little water added if it is very thick. Suspended in the fluid is ten per cent. of iodoform, practically none of which is actually in solution. To the fact that the iodoform is not really dissolved, as it is in ether, is due no doubt the immunity from iodoform poisoning, from which none of the author's cases have suffered.

As to the method of injection and the preparation of the emulsion: Dr. Barling has often injected the fluid without sterilizing it, but as an extra precaution latterly he has had it heated for half an hour in a water-bath. The iodoform lying at the bottom of the fluid is not lost by volatilization. The emulsion is best freshly prepared. The syringe should be one capable of holding not less than six drachms, of being taken entirely to pieces, and it should be supplied with coarse needles as the emulsion is rather thick; all parts should be boiled just before use. The amount to be injected varies from one to five or six drachms, according to the age of the patient and the joint involved. For instance, into the knee-joint of a child of five or six years two or three drachms may be introduced; into the corresponding joint of an adult, twice that amount. It is not always necessary to inject into the joint cavity; greater advantage is often obtained by injecting into the thickenings of the tendon sheaths around, as in the wrist-joint, or into the pulpy thickenings produced by the tubercular infiltration penetrating the joint capsule, such as ocurs in the front of and behind the great trochanter in the hip-joint. In these cases smaller quantity of the emulsion is used.

The immediate effect of the injection into a joint cavity is to set up a good deal of effusion, the swelling increasing for about twenty-four hours. This may cause a considerable amount of pain, and the temperature rises from two to four degrees, but by the fourth day it generally becomes normal, the pain disappears, and the swelling also in about ten days. If the injection is only into the tissues around the joint the local and general disturbances are much less marked. The injection may be repeated, either exactly into the same part or more often at one adjacent; but he has been in the habit of allowing at least a fortnight to intervene before repeating the attack,

It goes without saying that this is no remedy for tubercular lesions in the bones, such as are inaccessible to the emulsion; when, however, we have superficial caries of the ends, secondary to destruction of cartilage from synovial invasion, the effect is valuable. It is, however, in the granulation thickenings, with caseation of the synovial membranes, tendon sheaths, and other soft structures around the joints, that the best effects are seen. The diminution of swelling, and the loss of the elastic semi

fluctuating feel that these tubercular formations produce, and eventually their disappearance, are the indications of the value of the remedy. Every one is of course familiar with the difficulty in arriving at the correct conclusion as to the value of drugs in the treatment of disease. The statistical method has so many weak points that it is of no value here; the judgment of the individual surgeon must be taken for what it is worth, and he has no hesitation in saying that many of his cases have derived great benefit from injections of iodoform emulsion in tubercular joint disease. Rest and fixation are carried out by the writer thoroughly. If the cases are not doing well he resorts to the injections, still keeping the part at rest. If improvement now takes place instead of progress of the disease—a change he frequently sees—surely there is every justification for speaking well of the use of iodoform, seeing that the only altered condition is the injection of the emulsion. All cases do not benefit, and he is not able to distinguish positively what are the conditions under which the emulsion will do good.

If evil effects, local or general, followed the injections, they might weigh heavily against their use. But the writer is able to say that in no case, either in hospital or in private practise, has he seen any drawback beyond the slight feverish disturbance he has already described; and in private cases, when he has advised this treatment and left it to the practitioner in charge to carry it out, he has heard of no mishap of any kind, although he has always made inquiries.

The Operative Treatment of Myopia.

A pamphlet on the operative treatment of myopia, which has just been published by Dr. Fukala, has attracted considerable attention in medical circles in Austria. It contains an interesting account of the stages by which the author was led to remove the lens in cases of high myopia, in spite of the fact that the operation was not approved of by ophthalmologists so distinguished as Donders, Graefe, and Arlt. In many cases he has found that the patient's distant vision was good after the operation and that near vision was also improved. Choroiditis is not a contra-indication. The lens is divided into several portions by Graefe's small knife; after some days when there are symptoms of cyclitis and increased tension linear extraction is performed without excision of the iris. Many eminent German ophthalmic surgeons have operated in this way and have obtained brilliant results. After the removal of the lens there is a great decrease of the refraction, varying in amount from 15 D. to 16 D., and in one case even reaching 28 D. The detachment of the retina which accompanies high myopia is also checked. Dr. Fukala has succeeded in proving that high myopia is caused, not merely by the lengthening of the axis of the eye, but also by an increase in the refracting power of the lens. Professor Vossius has shown his appreciation of Dr. Fukala's operation by comparing it to the operation for iridectomy devised by Professor Graefe.

The Surgery of the Lung.

Tuffier read a very full and important paper at Moscow International Medical Congress upon the surgical treatment of tubercular cavities and of gangrene of the lung. He maintained that in every case of surgical interference with the lung there were three separate factors to be borne in mind: (1) The opening of the thorax; (2) the treatment of the pleura; (3) the incision into the lung. The opening of the thorax is a comparatively simple matter—little or no trouble arises so long as the parietal and visceral layers of the pleura are adherent. But when there are no adhesions in the pleura at the place where the chest has been opened it seems better to either look for them within the thorax or actually to make them. Tuffier makes his adhesions when it is necessary to do so by seizing the retracted lung, drawing it into the wound in the chest wall and fixing it there. This fixation, he thinks, presents many advantages, for it diminishes at once any threatening asphyxia, it lessens any anxiety which may be felt by the surgeon, and it relieves the arterial tension.

As soon as the lung has been exposed the surgeon must determine the point at which he is going to incise its tissue, and although hæmorrhage is the most serious accident that can happen, Tuffier finds that its occurrence is not very frequent. When the cavity has been exposed it must be explored both by touch and by sight, and the surgeon should always endeavour to ascertain whether the lesion is single or multiple before he plugs or drains it without first washing it out.

Tuffier then proceeded to consider the surgical treatment to be employed in the individual diseases to which the lung is liable, laying especial stress upon the treatmenl of pulmonary abscess, bronchiectasis, ang gangrene of the lung.

Cancer of the Breast Treated by Injection of Alcohol.

Dr. William Yeats reports in the British Medical Journal, Sept. 25, 1897, the case of a lady, aged 58, widow, the mother of three children, middle sized, fairly nourished, rather sallow, and looking older than she is, presented herself in my room on February 17th, the doctor says, complaining of a growth in her left breast. In the family history there was nothing particular to note either in regard to the direct or collateral members of her family, except that one sister, whom also I attended, died of cancer originating in the anterior mediastinum, developing outwards and involving the sternum and the anterior extremities of the second, third, and fourth ribs. As to the personal history of the patient: she had very little to complain about; her health had always been considered satisfactory, her position very comfortable indeed for her, and her habits had been good.

The history of the growth in the left breast was as follows: She stated that in June, 1896, she accidentally noticed, in the course of her toilet, a hard lump; that this steadily enlarged, but it was only in January of this year when the skin gave way, an offensive discharge was set up, and the pain became considerable, that she resolved to seek advice. She knew no cause. On examination the left breast was fully twice as large as the right, and very much heavier, the nipple was much retracted, the skin was ulcerated under and to the left of the nipple for about an inch, considerably indurated around, and adherent to the underlying parts. On palpation there was found at once a large tumour, hardy and knobby. There were several smaller masses along the lower edge of the pectoralis major, and the glands in the axilla were a good deal enlarged. She complained, too, of the characteristic pains, which were aggravated by handling. There was no doubt about the diagnosis. The right breast was very well developed and healthy. On being informed of the nature of the disease—which she had surmised—and advised that complete and immediate removal of all the parts was, perhaps, the best procedure, she refused to submit to the operation.

Bearing in mind a form of treatment by injection of a mixture of absolute alcohol and distilled water used by Dr. O. Hasse, and published in the *Archiv fur path. Anat.*, B. 146, IIft. 2, S. 209, November 4th, 1896, Zur Krebsheilung, which had been brought to my notice by Mr. Thomas Windsor, I at once suggested and recommended the plan, and to this she readily acceded. Accordingly on February 20th, with a mixture of 40 parts absolute alcohol and 60 parts distilled water, 23 syringefuls, each of 20 minims, were injected deeply into the tissues all round the tumour, and into the axilla in the neighbourhood of the enlarged glands. The injections, averaging from 22 to 25 syringefuls each time, were repeated on Februrry 27th, March 3rd, 8th, 13th, 17th, 20th, 24th, 27th, 31st, April 3rd, 8th, 11th, 14th, 18th, 25th, and May 2nd. Each sitting occupied about three-quarters of an hour, and as the injected fluid had a great tendency to run back again, to obviate this I found a smear of collodion over the needle pricks the best preventive. The patient experienced considerable immediate pain from the injections, lasting from half to one hour. After the second series of injections, the patient declared that the sensations in the breast were altered, the shooting pains were no more felt, and the itching on the surface of the breast which she had complained of disappeared and never recurred. After the subsidence of the immediate painful effects of all the other injections, the patient felt more comfortable in every way. When the process had been continued for five weeks, the parts around the tumour began to be œdematous, but still the injections were continued into and beyond the œdematous parts. During the sixth week the patient and her nurse stated that they considered that the growth was less, and certainly at the beginning of the eighth week (April 11th) the whole breast, including the tumour, had diminished in size.

After this date all the parts, breast and tumour, rapidly shrunk, until in May there was actually nothing left of the mamma to be felt by the hand, and practically nothing left of the tumour but the nipple and slight thickening under it. There was still œdema in the injected area. The glands in the axilla could not be detected. At this time I asked Mr. Windsor to examine the case, which he did on May 12th, and he stated "that whilst the right was a fairly large hanging breast, the other—the left breast—had practically disappeared, the nipple only remaining; that he did not find any thickening under the pectoralis nor enlarged glands in the axilla." After the seventeen injections, a complete structural change to all appearance having taken place, it was intended to continue the injections at longer intervals for a considerable time, but unfortunately the patient became ill otherwise. She lost her appetite, she became slightly jaundiced, and on examining

her in bed on May 16th it was found she was suffering from cancer of the liver with ascites. This being the case nothing further was done; the patient rapidly got worse, and died on June 10th.

After death, the breast and all the surrounding structures were removed as well as a part of the liver; and these I submitted for examination to Dr Delépine, Professor of Pathology, Owens College, and subjoined are his report and remarks, dated July 22nd, 1897:

"The mamma is replaced by a dense fibrous-looking mass with several processes extending into the surrounding fat. It is firmly connected with the subjacent pectoral muscles. The skin is rough, superficially ulcerated at one place, and adherent to the subjacent tissue round the nipple. The nipple is depressed but not considerably retracted.

"*Microscopically*.—The cutis vera, subcutaneous tissue, and fat surrounding the mamma show distinct signs of proliferative inflammation of the connective tissue elements, and little infiltration with leucocytes.

"The tumour itself presents, in most places, the appearance of an atrophied scirrhous carcinoma—that is, the epithelial cells are small, they do not fill the alveoli containing them, and the stroma is, generally speaking, abundant, and shows signs of great proliferative activity, the periacinous connective tissue show in a marked degree the metamorphosis described as elastic degeneration. These signs of atrophy of epithelial elements and increase of connective tissue stroma are not absolutely general, and in some parts the tumour still presents the appearances of a typical scirrhous carcinoma.

"The section of liver shows several confluent nodules of scirrhous carcinoma, very cellular, epithelial cells of the same type as those found in the mammary tumour, extensive tracts of necrosis, biliary pigmentation, and capsular hepatitis.

"In conclusion, I would suggest that the mammary tumour shows signs of marked irritation of the connective tissue elements, and atrophy of the epithelial cells, and that this may be fairly attributed in part to the action of the alcoholic injections, the similarity existing between the hepatic secondary growth and the primary mammary tumour throwing a certain amount of doubt over this conclusion."

The clinical history showed clearly an enormous diminution of the cancer of the breast and complete disappearance of the glands in the axilla; and it may be concluded that had not the cancer in the liver developed, there was every prospect of a complete cure of the breast.

The action of the alcoholic injections would seem to be that the injected tissues, more especially the cellular, become indurated and contracted, that the blood vessels become sealed up and the nerves compressed, and hence the strangling of the nutrition supply and the shrivelling and atrophy of the tumour,

The cases in which this plan would seem mose likely to be suggested are those where operation is absolutely refused or impracticable, those which have recurred and are unfit for further operation, and perhaps certain cases after operation with the view of preventing recurrence.

The Surgical Treatment of Suppurative Pericarditis.

In 1876 it was suggested, by Roberts, of Philadelphia, (Hospital Gazette), that pus in the pericardium should be treated by drainage, a method that has since been adopted in a large number of cases. The percentage of recoveries from suppurative pericarditis treated thus is over thirty-eight. The results are more favourable than would appear from the figure given (which is taken from twenty-six cases of incision and drainage collected by Roberts), because, of the sixteen who died, nine were septic when operated upon, and were consequently unlikely to survive; the remaining seven fatal cases all had complications, such as empyema, cardiac disease, or lesions of the lungs or pleura. Pericardotomy, with drainage, is the only treatment advocated, and should be employed as soon as a diagnosis of pryopericardium is made. The diagnosis between pus and serum in the pericardial sac can only be made by an exploratory puncture with a trocar or an aspirating needle; the best point for using such instruments being in the left xiphoid fossa, close to the angle where the xiphoid cartilage and the seventh costal cartilage unite. In shreddy membranous effusions Roberts advocates irrigation, but not in cases in which the pus readily escapes through the incision and drainage tube. The danger of wounding the pleura, and thus causing a complicating pleuritis by direct infection has led Roberts to devise and advocate a method of resecting the costal cartilages, which is a valuable improvement in the technique of the operation. This consists of making a trap-door opening into the chest by resecting portions of the fourth and fifth costal cartilages, and turning the chondroplastic flap thus fashioned upward on a hinge. This

exposes the mammary vessels, lung and pleura, which are pushed to the left without injury, uncovering the pericardium, which can thus be readily opened and drained.

Neuroses of Gout.

In a lengthy paper upon the neuroses of the gouty diathesis, presented by Dr. L. Harrison Mettler, of Chicago, at the recent meeting of the Mississippi Valley Medical Association, the author takes the position that the uric acid is not the cause of the familiar neurotic manifestations of gout. He states that there are in the main three general theories in regard to these neuroses. The followers of Haig believe that they are due to uric acid in the blood (chemical theory). Others think that they, as well as true gout itself, are but expressions of a purely neurotic diathesis (neurotic theory). Still others, with whom the author places himself, adopt the view that a nervous taint, acquired or inherited, is the essential cause, the back-ground, for gout and all the gouty manifestations; whereas these manifestations may be enhanced or made to assume variable characteristics by the results of the auto-intoxication which is itself a result of the faulty metabolism produced by the original faulty innervation. With Cullen and Duckworth, therefore, he believes that primarily the gouty manifestations are the result of a trophoneurosis. Faulty innervation deranges the metabolic functions of the organs, certain toxic excrementitious products are over-produced or uneliminated, or these reacting again on the vicious nervous system produce the various neuroses. These excrementitious products as revealed in the alloxuric bodies of the urine consist of uric acid and the xanthin bases. In the gouty condition the uric acid is frequently diminished in amount, but the increase of the xanthins explains the total increase of the alloxuric substances.

With Kolisch, and some other investigators, he believes that it is the retention of the xanthins that give rise to the symptoms of gout, whereas the uric acid which is now known to be formed only in the kidney, and when formed in the blood is reabsorbed from that organ, enters into combination to form the biurate of soda, and under that form is deposited by some unexplainable cause in the joints. The symptoms of lithæmia and certain forms of neurasthenia are also due to the retained xanthins and not to the uric acid. Hence neurasthenia, lithæmia and gout have many features in common, auto-intoxication being the chief. The uric acid is significant principally in only one of these, namely, gout in which it goes toward the production of the arthritic deposits. The retained toxins, especially the xanthins, are responsible for the general complexus of symptoms characteristic of all these diseases. Upon this ground it is easier to explain the many bizane features of these three sets of diseases and to account for the variableness of the results oft-times obtained from similar treatment in similar cases. In developing these ideas in the first half of his paper Dr. Mettler refers to some of the more recent studies upon uric acid, quoting from Futcher, Neusser, Kolisch and others. Several interesting cases are cited, illustrating the difficulty of deciding whether the neurotic constitution is the cause or the result of the lithæmic state.

The latter half of the author's paper tabulates a series of neuroses associated with the gouty diathesis, and under each head are presented cases and some general suggestions in regard to diagnosis and treatment. Among the neuroses of the gouty state are cephalalgia, epilepsy, cardiac arrhythmia, chorea and convulsions, vertigo, pain, including neuralgia and psychic pain, or mental depression, hysteria, exophthalmic goitre, asthma, nervous dyspepsia, diabetes, multiple neuritis, facial paralysis, cerebral apoplexy and aphasia.

It will thus be seen that the author agrees with Haig and Murchison in assigning lithæmia as the cause of many neuroses, but he differs from them in giving the credit to the uric acid, he believing that the xanthin bases are the causative factors.

The paper ought to be read in its entirety to grasp the author's full argument and to appreciate the proofs which he brings forward of an experimental and clinical character.

Treatment of Infantile Paralysis.

Larat gives the result of his experience of the treatment of this disease. He says (British Medical Journal) that no matter how grave the case may be in appearance, electricity must be employed, and that as soon as the diagnosis is made. The chief point is the method employed. Faradisation is not only useless, but positively harmful, for every time a muscle in process of atrophy, and which does not respond to the current, is faradised the tendency to atrophy is increased. It is, therefore, the continued current which should be used, and the following is the method recommended by the author, which has the advantage of being quite painless—a point of great importance in children affected with any nerve lesion.

A large disc of tin, the size of the palm of the hand, is covered with chamois leather. This, which should be moistened with tepid water (not salt solution) is placed over the cervicodorsal region in the case of an upper timb paralysis, or over the dorso-lumbar region when a lower limb is affected. This disc forms the positive pole of the battery. The negative pole consists of a small disc placed in a basin of tepid water in which the extremity of the affected limb is emerged, hand or foot as the case may be, and the ankle or wrist must be covered by water. A current of from 8 to 10 milliampéres intensity is passed for about ten minutes. With so large a surface of application the density of current at any particular point is very slight and the pain *nil*. After ten minutes the current is interrupted a few times, and it is also advisable when interrugting to reverse the current. In this way these interruptions should not exceed the number of 100, and should be made slowly. Later on, when the disease is subsiding, the number of interruptions may be increased and the interval between them shortened. The author points out the only too common fallacy of doing too much in the early history of the case. This treatment must be carried out with great patience, and no decided result must be expected for a long lime. The slightest infantile paralysis will require a year's treatment, a bad case several years, but the earlier the treatment is begun the better, and electrical intervention in the very beginning, especially during the febrile period, is of the very greatest importance. The author does not mean it to be supposed that certain cornual cells which bear the full brunt of the disease will subsequently recover, but he is firmly of opinion that the disease is a selective one, that is to say, that side by side are cells severely affected or disorganised, and others only slightly so. These latter may become affected or escape, and this result will depend on electric application. Hence the importance of early treatment.

The Microscopic Examination of Milk.

A recent publication from the Health Department, Baltimore, draws attention to the danger which may arise from the consumption of the milk of cows suffering from garget, a purulent non-tuberculous affection of the milk ducts. Microscopic examination of the milk shows the presence of pus cells and of streptococci, and instances are recorded where its use has been followed by epidemic outbreaks of gastro-intestinal irritation. Streptococcus enteritis has been described by various authors; it is especially common in children and young infants, and there can be no doubt that many of the fatal cases of so-called cholera infantum are attributable to this cause. The method of examination consists of first centrifugalising the milk and then examining the sediment with an oil immersion lens, after fixing and staining with methylene blue. Most samples of milk mixed from a large herd will contain a few pus cells, but if they are present in considerable numbers, the sample should be condemned and the herd inspected with a view to eliminating the diseased animal. It is suggested that the standard for exclusion should be fixed at an average of more than five pus cells to the field of a one-twelfth oil immersion lens. Garget is most frequently met with amongst cattle kept in dirty, ill-ventilated stables with insufficient space, light, and pasturage.

New Treatment of Yellow Fever.

Dr. S. C. Martin in the St. Louis Medical Era has a timely and instructive editoral on the treatment of this disease.

The recent invasion of our southern coast by yellow fever has excited unusual interest in this much dreaded disease, not alone because of the threatened danger to the health of the communities exposed to its ravages, but the radical change of treatment now anticipated, based on the lately discovered cause of the disease. In the past we have been groping in the dark. Our treatment was empirical because our knowledge of the disease was empirical. Observers viewing the disease in its different forms and from different standpoints, arrived at conclusions touching its etiology, pathology and therapy, widely at variance, and this has led to confusion in methods of treatment, calculated to defeat united action in resisting its encroachments. There has been no lack of effort on the part of the medical profession to discover the nature of this scourge of the human family, but until recently its etiology remained a mystery, and diagnosis rested on a more or less skillful grouping of symptoms. The first cases occurring in a locality rarely furnished the typical features of the disease. It was not distinguished from other diseases until a sufficient number of cases had occurred to reveal its character, and when it was recognized it was generally too late to arrest its progress. The clinical developments required time to allay doubts, and as long as doubts were entertained the fear of creating an unnecessary panic delayed proper measures for stamping it out. In this way the disease was allowed to spread, until

many lives were sacrificed. It remained for Dr. Sanarelli, who has for a long time given his special attention to the study of yellow fever, to discover the specific microbe which produces the disease. This microbe is reported to be a tiny rod with rounded ends, and has its habitat exclusively in the blood and organic tissues. It eluded the search of other bacterioligists by reason of its absence from the alimentary canal where it was expected to be found. Another reason for its non-discovery sooner is the great variety of other micro-organisms usually present at the same time in yellow fever patients. Many of these have been mistaken for the genuine yellow fever germs, but the tests to which they were subjected failed to establish any etiological connection with the disease. On the other hand, Sanarelli's tests of inoculation of mammals have invariably succeeded in developing the symptoms of yellow fever. These experiments have been made on mice, guinea pigs, rabbits, goats, monkeys and dogs. Mice die of blood poison with fatty degeneration of the liver, in five days; rabbits in from two to four days; goats and sheep die quickly from suppression of urine and fatty degeneration of the liver; dogs, particularly, manifest the same symptoms from inoculation observed in the human subject who has contracted yellow fever—vomiting, suppression of urine, degeneration of the liver, and hemorrhages are prominent developments in these cases. Dr. Sanarelli is now preparing an antitoxin by inoculating horses with the culture of this newly discovered microbe, which he will utilize immediately in the treatment of yellow fever. His belief that it will arrest and eventually exterminate the disease is well grounded, for the disease itself affords immunity against subsequent attacks, the same as small-pox. If vaccination protects against small-pox, why should not yellow fever antitoxin furnish immunity to this disease? The serum treatment, then, supported by sanitary aids, nourishment and such medicinal auxiliaries as morbid conditions indicate, promises to save millions of lives from the ravages of a disease that up to this time has baffled the utmost skill of the medical profession. High temperature should be combated by sponging with cold water or the use of some safe anti-pyretic. Hyperpyrexia should be treated with cold water affusions and cloths wrung out of ice water applied to the head. A few drops of chloroform will often allay the vomiting, or in cases of algidity, champagne may be given with benefit. Antacids, lime water and milk with ice, should be freely given, and sinapisms applied to the epigastrium. Sternberg recommends bicarbonate of sodium, grs. 150, bichloride of mercury, gr. $\frac{1}{8}$, and water, oz. 40—of which 3 tablespoonfuls are to be taken every hour. No solid food should be given for several days. Nutritive enemas may be administered if the stomach rejects the lime water and milk. As the disease is propagated by ærial diffusion, a rigid quarantine and isolation of yellow fever patients should be enforced.

Scientific Treatment of Sewage.

Dibbin, at the Congress of the Sanitary Institute, discussed this subject. The author said:

In all methods of sewage purification which had been previously employed final oxidation had been effected, although this had failed to be generally recognized. The best and most natural system hitherto tried, namely, the application of sewage to land, depended for its success entirely upon the fostering and increase of micro-organisms. But the use of crude sewage upon land led to great difficulties, and, in consequence, previous chemical precipitation had been resorted to. It had not been seen that the same agencies which destroyed the dissolved impurities could, if given the necessary conditions, equally deal with those in suspension; hence came all the numerous chemical schemes, with their inevitable accompaniment, sludge. With the clear effluent it was possible to deal, although the process, being dependent so much upon local conditions and climatic influences, was always uncertain; but the sludge always remained the *bete noire* of all those concerned in sewage disposal. In the recognition of the fact that all processes of sewage purification must be made subservient to the requirements of the various micro-organisms lay the whole secret of success. All sterilising or antiseptic agents must be strictly excluded; a condition of neutrality or slight alkalinity must be maintained; oxygen, anyhow in the final stages, must be freely supplied; the temperature must be kept above the freezing point of water, and the amount of food must be proportioned to the powers of the organisms. As far as the results of working on these principles were concerned, the author could confidently state, of practical knowledge, that, first, no previous chemical treatment was required; secondly, no sludge was produced, thereby removing the chief difficulty hitherto met with; and, thirdly, the quality of the final effluent could be controlled, admitting as it did of being brought to any required degree of purity. The method indicated, the author is of opinion, was the present position of the disposal

of the foul matters which rendered sewage offensive, repugnant to the senses, and dangerous to health, and the author is confident that it would only be by careful and continuous study of the question on these lines that advance will be made. The moment that the neutral agencies around them were interfered with, and force attempted to be used in the shape of antiseptics, heaping vast masses of putrefying sludge together, etc., failure would inevitably dog their footsteps as it had done for so many years past in place after place.

Etiology of Lead Poisoning.

Pel draws attention to several cases in which the source of lead poisoning was exceptional and misleading. (British Medical Journal, Sept. 25th, 1897). Case 1 occurred in a shoemaker, aged 19, who worked in a factory in which tin nails were used for the boots. The patient was in the habit of putting the nails into his mouth. Tin contains lead, and hence the poisoning. Besides pallor and the blue line he had pains in the abdomen, spine, shoulders, and testicles. It must remain unsettled as to whether the testicular pain was a manifestation of the intoxication, and hence a genuine plumbic neuralgia. Case 2, a man aged 44, a cigar roller, presented the blue line, constipation, pallor, pains, and neurasthenic symptoms. The board used for rolling the cigars on was covered with tin. The patient cut the cigars with a knife, which he held in his mouth, as it worked best when moistened. The metal cover was indented with the cuts of the knife. Another possible cause of the poisoning lay in the contamination of the hands from the tin, and the conveyance of the poison to the mouth in this way. Case 3 occurred in a diamond worker, Owing to a failure of eyesight he was obliged to adopt another occupation, and five months later he showed signs of acute lead poisoning, consisting of vomiting, colic, constipation, indrawn abdomen, increased vascular tension, typical urine. A blue line was present, as well as bluish black spots on the buccal mucous membrane. The source of the poisoning must be looked for in his previous occupation. Some diamond workers have to fix the small diamonds in a mass of lead. This lead is worked with the fingers, which are moistened from the mouth. There was no other source of lead poisoning in this case. It is a striking fact that the patient, who had been working in the diamond trade for 15 years, should only develop symptoms five months after he left this occupation. The poison must have been stored away somewhere in the body, and then at length it found an entrance into the blood, from which it was excreted into the alimentary canal. Lead poisoning is rare in the diamond workers, but is known to occur in them. It is noteworthy that at times very small quantities of lead will suffice to produce symptoms of poisoning, whereas at times large doses are inefficient.

The Health of Mr. Ernest Hart.

The health of Mr. Ernest Hart, editor of the British Medical Journal, has been for some time impaired. Three weeks ago, says the British Medical Journal, he was unable, owing to acute physical suffering, to attend the meeting of the Reference Committee. Some necrosis of the bones of the foot had supervened upon an ulceration, doubtless associated with glycosuria. The symptoms became more urgent, and Mr. Hart was seen by Mr. Lockwood, who, after consultation with Mr. Bryant and Mr. Mitchell Bruce, performed amputation of the leg. This severe trial was borne with great courage and fortitude, and Mr. Hart's friends will now be happy to learn that he has made safe and steady progress towards recovery, and is convalescent. We need not say how deep is our sympathy with Mr. Hart in his misfortune, and we express a universal and heartfelt wish in saying that we hope that Mr. Hart's health and strength may soon be completely restored.

Constipation in the Puerperium.

Huber, states that alarming symptoms in childbed, may depend entirely on constipation and disappear when the bowels are opened. No doubt the bowels are naturally slow to act after delivery. Sometimes the retention of fæcal matter simulates metroperitonitis. Not only is there loss of appetite with foul tongue and breath, but tympanitic distention of the abdomen sets in with rigors, and temperature occasionally as high as 104 deg. When a purge succeeds all these symptoms vanish. If the constipation be neglected true peritonitis may undoubtedly set in. This complication is not the peritonitis of puerperal infection due to the streptococcus, but a peritonitis of stercoral infection where the offending germ is the bacillus coli, which passing through the intestine infects the serous coat. There is also a later form of constipation in the puerperium, accompanied with hæmorrhages, hæmorrhoids, and great pelvic congestion.

The Evil Effects of Too Much Education with the Young.

Pediatrics, editorially, speaks intelligently on this subject.

Complaints are constantly made that the health, and particularly the eyesight of children, is permanently injured by a too close application to the desk. However, the lot of children at school here is a light and easy one, when compared to that of their juvenile fellow-students in Germany. There, indeed, if report does not speak falsely, the brain work that quite a young child is expected to get through in a day is sufficient to cause much alarm. In Germany many subjects are taught in the schools which in other countries are included in the University course. German parents are now awakening to the dangers of this cramming system, and are becoming day by day more nervous as to the ultimate result on the physique and stamina of the rising generation. Professor Eulenburg some time ago criticised the hours of work of a celebrated Berlin "gymnasium," where the sixth class has in the week thirty-three lessons. Dr. Eulenburg points out that according to Griesbach the brain of an overtaxed child requires several hours of rest before regaining its normal faculties; and Burgerstein says that boys of twelve years of age require, as a rule, an interval of several minutes after forty minutes devoted to study. Although there is no country in the world where the young are subjected to such brain pressure in the schools as Germany, yet the trend of modern education, both here and in England, points the same way. The worst feature of the case is that young children are not only compelled to learn an enormous quantity of subjects, but also so many useless ones. Elementary schools should teach nothing but elementary subjects. It certainly seems that the results of modern education are in no way commensurate with the trouble and expense incurred.

Eclampsia and Albuminuria in Pregnancy.

Patay has recorded nineteen cases of the albuminuria of pregnancy, with only four where convulsions occurred. On the other hand there was one case of eclampsia without albuminuria. In one of the cases of albuminuria there were twins, the mother suffered from dyspnœa, scantiness of urine, and somnolence. Still, not a single convulsion occurred. The twins were expelled; they weighed 2 lbs. 6 oz. and 2 pounds respectively. The placenta weighed under a pound, and there was not a trace of old or recent hæmorrhage into its substance. On the day after delivery the patient had an attack of right hemiplegia, complete aphasia, and incontinence of urine and fæces. Four months after delivery they persisted.

Diphtheritic Affections of the Heart.

Mollard and Regaud in the Lancet record the effects upon the heart of fatal doses of diphtheria toxin injected into dogs, rabbits, and guinea-pigs. True myocarditis was never observed, and cardiac symptoms were, as a rule, obscured by paralysis and other more marked affections, nor were the macroscopic lesions observed at the necropsies ever unassociated with disease of other organs. The naked-eye appearance of the myocardium did not suggest any microscopic changes such as were actually found. Further examination showed that in every case (18 in all) of experimental diphtheritic intoxication the myocardium was affected. The affection invariably started in, and was sometimes confined to, the muscular tissue, and it commenced in the contractile substance as an impairment of the normal striation, and later attacked the nucleus and protoplasm, leading eventually in some cases to complete destruction of the muscular substance. Lesions of the myocardial vessels were very frequent, the muscular coat of the arterioles being practicularly affected; the changes in the smooth muscle were strictly comparable to the contemporary alterations in the cardiac muscular fibres. In acute and subacute cases (surviving at longest seventeen days) no hyperplasia of the connective tissue elements was observed, the sole important change in the connective tissue being leucocytosis. This diffuse interstitial leucocytosis appears to have been no more than a phase in the general leucocytosis which is constant in diphtheria. The nodular interstitial leucocytosis is in relation to the foci of muscular disintegration. The primary muscular lesion leads to leucocytosis. The leucocytes absorb the muscular *debris*, particularly the sarcoplasmic exudations. The foci and disintegration become the foci of phagocytosis. The whole process is similar, both in symptoms and pathological appearances, to that found in human diphtheria.

Every physician who uses electricity should send for a copy of The Electro-Therapeutist, a monthly journal devoted to electro-therapeutics for the general practitioner. Write the editor, Wm. F. Howe, M. D., Indianapolis, Ind., mentioning this journal, and he will send you sample copies gratis.

Intermittent Hemiplegia.

At a recent meeting of the Liverpool Medical Institution, Dr. A. Davidson related the following case: The patient was admitted into the hospital on January 18, 1897, suffering from left hemiplegia. He was a watchman, seventy-three years old, and had always enjoyed good health. On January 18th, after arranging his lamps, he sat down in his sentry-box before the fire, and on trying to get up again he found himself unable to do so. Two men tried to raise him, but he was unable to stand alone; there was no loss of consciousness at any time. He was brought to the hospital and his left side was found to be completely paralyzed. The pupils were equal, and reacted to light; the upper part of the face was partially weakened on the left side; at the lower part, the mouth was drawn to the right side; the articulation was imperfect and mumbling, and the tongue was protruded slightly to the left side. The left arm and leg were totally paralyzed. Sensation seemed everywhere normal. The pulse was 76 and regular. Two hours after his admission the patient had regained complete power in his face and limbs, and passed urine without trouble. He seemed somewhat excited, but otherwise was quite well. During the night he had four or five hemiplegie attacks, each lasting from about fifteen to thirty minutes, without loss of consciousness.

On the morning of the 19th he was free from any sign of paralysis of the face, arm, or leg. Regarding his general condition, he was a hale-looking old man. The tongue was coated, the teeth were very defective, the appetite was good; the pulse was 76 and regular, the arteries were thickened and tortuous, and the heart sounds were normal; the lungs were emphysematous, there was slight cough with expectoration, and the urine was normal. At 12.30 P. M. he was again found to have complete paralysis of the face, arm, and leg of the left side. About 1.15 P. M. Dr. Davidson saw him for the first time. He had paralysis of the left side. He could wrinkle the brow on either side, and close both eyelids together, but he could not close the left eyelid without the right. The left side of the mouth was immobile. Articulation was only slightly affected. The left arm was quite powerless. In the left leg there was only a very slight ability to move the hip and knee. Sensation was normal. While he was still under examination (1.45 P. M.) he drew the author's attention to the gradual return of power in his left hand, and presently the paralysis entirely disappeared. He could now close the left eye independently, as well as the right. He was ordered to have a dose of calomel, and eight grains of bromide of potassium three times a day. During the next twenty-four hours several alterations of paralysis and recovery took place, but the remissions by degrees became shorter and slighter. On the night of January 20th the hemiplegia became almost permanent, and remained so until his removal from the hospital by his friends on the 28th. Dr. Davidson states that he has seen the patient twice since at his own home, the last time in the beginning of June. He remains in good health and spirits. The pulse is 72 and regular. The arm is completely paralyzed, he can just move the finger, and there is no rigidity or any pain except in the shoulder (rheumatic), the leg and face are rather better. He can lift the leg off the bed; there is some tenderness in the thigh. The tongue is protruded straight. The bladder is normal.

Dr. Davidson says this case is unique so far as he knows, and his explanation is that a thrombus in the atheromatous cerebral artery became partially detached and flapped to and fro in the current of blood, occasionally blocking the artery, but occasionally leaving the current free. Or if it was entirely detached, and arrested at the next bifurcation of the artery, he says, it might there sway to and fro like a ball valve until by continued growth it became fixed and a permanent block of the vessel resulted.

Disinfection of Typhoid Excreta.

Dr. W. G. Thompson, in the Albany Medical Annals, concludes his paper as follows:

1. The best disinfectants of typhoid stools for practical use are: (*a*) 1 to 500 acidulated solution of corrosive sublimate; (*b*) 1 to 10 crude carbolic acid solution; (*c*) chlorinated lime. 2. Owing to the possibility of injury to plumbing, the carbolic acid solution is preferable wherever plumbing is concerned. The lime is best for country use in privies and trenches. 3. The disinfectant should be thoroughly mixed with the stool and left in contact with it for fully two hours. Enough of the disinfectant must be added to cover completely the stool with the solution. 4. The bed pan should be kept ready filled at all times with at least a pint of the disinfectant, into which the stool is at once discharged, and should be cleaned with scalding water and one of the disinfecting solutions. 5. Rectal thermometers, syringes, tubes, and all utensils coming in contact with any of the fæcal matter must be disinfected with the corrosive-sub-

limate or carbolic acid solution. 6. After each stool the patient's perineum and adjacent parts should be washed and sponged with a 1 to 2,000 corrosive sublimate solution. 7. Nurses and attendants should be cautioned to wash their own hands thoroughly and immerse them in a 1 to 1,000 corrosive sublimate solution, after handling the bed pan, thermometer, syringe, or patient, or giving sponge or tub bath. 8. All linen and bedclothing used by the patient should be soaked in a 1 to 20 carbolic acid solution and subsequently boiled for fully two hours. 9. Disinfection of the stools should be begun as soon as the diagnosis of enteric fever is established, and should be continued for ten days after the temperature has remained at the normal. 10. In localities where a proper drainage system is lacking, the stools should either be mixed with sawdust and cremated, or buried in a trench four feet deep after being covered with chloride of lime.

The Climatic Treatment of Tuberculosis.

Dr. Vivant (Twelfth International Medical Congress) stated that the discovery of the tubercle bacillus has taken nothing from the importance of the climatic treatment of tuberculosis, in particular that of pulmonary tuberculosis, the most difficult to handle. The bacillus of tuberculosis resists alike high and low temperatures, so that there is no climate with absolute immunity. The climates most justly regarded as of value in the treatment of this disease offer a certain number of features in common, viz.: pure air—that is, oxygen in unlimited quantity; and relative dryness—that is, absence of fogs, of air charged with moisture, so interrupt the light, heat, and chemical action of the sun's rays. We know the importance of light for animal and vegetable cells, nnd we recognize that solar light rapidly kills bacteria. Air to be pure ought not to contain dust, especially pathogenic dust; it would be, therefore, useless to choose a windy place. Pathogenic dust is found especially in the midst of crowded places, and the danger of mixed infection arises; hence a person with pulmonary tuberculosis should especially avoid large cities. The temperature of the air as regards its influence upon the respiratory tract is of little importance; yet there is an advantage on the side of heat, inasmuch as cold climates expose the human organism, especially when feeble, to a variety of serious circulatory troubles included under the general term "colds." The stations on the Riviera, the plains of deserts, the high-altitude resorts, all offer in different degrees all these active elements in climatic treatment; but the plains and the deserts offer no shelter from the heavy winds, the principal agents of colds and principal disseminators of dust. The Mediterranean resorts offer the advantage over the mountains that, with a superior solar radiation, they are less cold, permitting the patient to live in the open air continually in light, thin clothes, giving the air and light the best chance to exert their favorable therapeutic action.

Feeding in Inherited Syphilis

Troisfontaines (Lancet) draws attention to the extreme importance of feeding with sterilized milk in cases of inherited specific disease, more particularly in those cases in which birth takes place before term. In these cases the child is often of extremely diminutive weight, and the author quotes a case recently under his own observation in which on the twenty-fifth day after birth the child only weighed 750 g. There had been repeated attacks of pemphigoid bullæ on the soles of the feet and lower limbs. The child was treated with Van Swieten's fluid, 20 minims being given in the twenty-four hours. The limbs were enveloped in wadding, and the diet consisted of sterilized cow's milk, the child having been weaned shortly after birth. About 18 g. of fluid, consisting of two-thirds sterilized milk and one-third water were given nine to ten times in the day. By six months old he had almost gained average weight, and had had only two slight attacks of intestinal catarrh. At 2½ years old he weighed 13½ kg., and with the exception of somewhat large and prominent forehead, there was no other morbid appearance, the teeth being well developed and normally situated. The author quotes other cases of a somewhat similar nature, all going to show the great importance of this method of rearing the child.

Sanmetto in Post-Gonorrheal Gleet.

Dr. Percy Newell, L. R. C. P. I., L. M., L. R. C. S. I., Mem. Brit. Med. Assoc., Crowborough, Sussex, England, writing, says: "I had a very obstinate case of gleet (post-gonorrheal) under my care, which did not show any sign of going, and was beginning to worry my patient. I had tried every remedy suggested in different works on surgery and therapeutics, but the wretched thing persisted. I put the patient on Sanmetto, a dose three times daily—in a week the thing was practically cured. I shall always stock Sanmetto in my surgery."

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Especially valuable in fevers, and often the only food the stomach will tolerate in many gastric and enteric diseases.—*Dominion Medical Monthly, Toronto.*

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It enjoys so widespread an endorsement from the medical profession that its reputation is beyond dispute.—*American Medico-Surgical Bulletin, New York.*

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It is peculiarly adapted to most of the diseases of infancy and childhood that have originated in the use of improper food.—*The St. Louis Medical Era.*

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IMPERIAL GRANUM has stood the test of many years, while many competing foods have come and gone, and have been missed by few or none. But it will have satisfactory results in nutrition far into the future, because it is based on merit and proven success in the past.—*The Pharmaceutical Record, N. Y.*

★ 'Physician's-samples' sent free, express-paid, to any physician—or as he may direct. ★

JOHN CARLE & SONS, Wholesale Druggists, 153 Water Street, NEW YORK CITY, N. Y.

The Early Training of Children for Throat Examination.

Scheppegrell, in the Laryngoscope for September, says:

Certain throats are abnormally sensitive on account of some pathological condition, which tends to cause gagging and other reflex disturbances. In many throats, however, this is not due to any diseased process, but simply to lack of training of the individual. Where this lack of training is combined with an inflammatory process, we have a condition of irritability which is trying both to the patient and to the physician. In some cases it is so aggravated that the mere protrusion of the tongue is sufficient to produce a severe paroxysm of retching.

These disagreeable symptoms could be avoided by the early training of children for throat examination. Many mothers realize the necessity of examining the throats of their children systematically, and, no doubt, many cases of incipient diphtheria have been arrested by the prompt recognition of the first deposit in the throat. Few parents, however, go beyond this.

A very simple procedure, and one which children soon learn to tolerate, is the depression of the tongue by means of a spatula or simply the handle of a spoon, in order to expose fully the palate, pharynx and tonsils. At first this produces some irritation, not only from the presence of the foreign body, but also by the spasmodic movements of the undisciplined tongue. This is overcome by patience, however, and the child soon learns to tolerate the spoon and to exhibit its throat with the utmost facility.

The advantage of this training is not merely theoretical, nor is it simply for the benefit of the physician. Many a little patient, no doubt, has had an untimely end on account of its inability to tolerate the application of the proper medicaments to the diseased throat. Even in the case of adults, every specialist realizes that the tolerance of the throat is an important factor in deciding between a mild internal operation or the graver external operation, or in some cases even the admissibility of an operation of any kind.

In routine cases also, both the patient and the physician are spared a great deal of annoyance by the proper training of the individual for throat examination. There are probably few cases in which this training is not practicable. The professional "sword swallower," in his early training, applies the handle of a spoon against his throat, which may be at first quite irritable, but this procedure soon effects such tolerance of the parts that later on the "swallowing of the sword" becomes an easy process.

A lady recently stated that her children had no difficulty in swallowing pills, because in their infancy her family physician had given them small bread pills to swallow in play, so that later on, when the necessary pills or capsules were to be administered, they were swallowed with equal facility.

The early training of children for throat examination is, therefore, not only useful, but may even prove an important factor in the prognosis of a disease which threatens the life of the patient. Every physician, therefore, should call the attention of the parent to the importance of early training in this matter, and show them by what simple means this end may be effected.

The Pathology and Treatment of Emphysema.

Dr. Harry Campbell, in the London Medical Journal, considers the important part which loss of pulmonary elasticity plays in the pathology of emphysema, and how recognition of this fact may furnish a clue to treatment. He holds that two essential factors contribute to the enlargement of the chest in hypertrophous emphysema, defective pulmonary elasticity and dyspnœa. Mere loss of pulmonary elasticity, by inducing thoracic expansion, is sufficient to bring about emphysema. Diminution of the expiratory range is one of the worst aspects of emphysema, and is brought about by fixation of the chest. From the foregoing considerations treatment of emphysema should aim at (*a*) preservation of the elasticity of the lungs, (*b*) prevention of the over-action of the costal elevators, so as to check thoracic expansion, and (*c*) maintenance of the normal mobility of the thorax. For the first point we should endeavor to check the advent of premature senility by causing the individual to lead a healthy and temperate life. Cough, blowing wind instruments, and all muscular exercises with fixed thorax should be avoided. To avoid over-action of the inspiratory muscles all causes of dyspnœa, such as running upstairs and hill-climbing, should be guarded against, and we should seek to antagonise the inspiratory muscles by calling the expiratory into play, as by systematically practising the deepest possible expirations This exercise should be practised for at least half an hour twice daily, from the earliest phase of the disease. This exercise may also check the tendency to fixation of the thorax, as it tends to increase thoracic mobility. External compression of the thorax during expiration is also useful.

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is a hypnotic of tried and approved value. It possesses undoubted advantages over other hypnotics in Prompt Effect, Reliable Action, Freedom from Evil After-effects and General Superior Therapeutic Value, as confirmed by contributions to current literature by H. C. Wood, W. Hale White, John V. Shoemaker, Chas. L. Dana, Chas. H. Steele, John Aulde, S. V. Clevenger, and many other authorities.

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PAMPHLETS CONTAINING CLINICAL REPORTS,

Notes of an Unusual Case of Gumma of the Tonsil.

Dr. Michels, in the Journal of Laryngology, Rhinology and Otology, gives brief notes of a case, twenty-eight years of age, who came to the German Hospital in August, 1894, complaining of a swelling in the left side of his throat. He had been operated on in Liverpool for a similar swelling early in the year, but during the last few weeks had noticed the recurrence of the tumour.

The left side of the pharynx seemed to be filled up by a large, round, globular tumour of the size of a walnut; the surface of the tumour was smooth and almost black in colour. There was no glandular swelling; no signs of syphilis. As the patient was rather restless and difficult to examine, he was put under chloroform with a view to ascertain the extension and the relations of the tumour and to act accordingly. While passing the finger behind and below the tumour, the tissues suddenly gave way and the whole of the tumour became detached, leaving a deep cavity in the left tonsil; there was hardly any hemorrhage.

During the next few days the walls of the cavity assumed a very unhealthy appearance; gangrenous shreds formed and became detached, and an ulceration of a serpiginous character began to form. Although the patient denied to have had syphilis we felt justified in giving large doses of iodine and mercury, and in a very short time the ulceration healed and the cavity filled up. The patient was discharged three weeks after the removal of the tumor, with the instruction to continue the use of mercury and to attend as an out-patient, but he was never seen again. The tumour was formed by round cells; the outer parts were gangrenous and did not show any definite structure.

Puerperal Biliary Colic.

According to Dr. Eiermann, cases of biliary colic occurring after labor are rare. He relates one occurring in a primipara, aged twenty-nine, who suffered from albuminuria during pregnancy. Delivery was difficult, and a rupture of the perineum almost into the rectum occurred. In five days the œdema of the legs disappeared, but then the patient was seized with shivering and severe pain in the upper part of the abdomen, On the next day there was distinct jaundice, which disappeared in two or three days. There had been no previous history of gall stones. Eiermann attributed the colic to the suddenly altered pressure relations in the abdomen after labor. Gottschalk has seen nine or ten cases of gall stones in women in the puerperal state. In one the colic reappeared after a subsequent pregnancy, the patient having been free from it in the interval. The diagnosis may be difficult if there is no jaundice.

Treatment of Appendicitis.

McBurney, in the Medical News, points out that there is no medical cure for appendicitis, even though some cases recover without operation; and while he considers appendicitis a surgical disease, yet operation may not be necessary in every case. The true cause of this affection is probably a stoppage of the drainage from the appendix to the colon, and preliminary treatment is often worse than useless. The opium treatment relieves pain and discomfort, but entirely masks the symptoms at a most important time, for it is in the first twenty-four hours from the beginning of the attack that we can decide not only as to the diagnosis, but as to the probable course and result of the case. If in five or six hours there is no increase in urgency, the patient is not in immediate danger if kept at perfect rest in bed; if in twelve hours there is still no increase in the severity of the symptoms, the patient should soon begin to improve. On the other hand, if the urgency of the case has steadily increased in twelve hours from the time when the diagnosis was made, an operation will probably be called for. After two attacks a patient is sure to have a third, and each attack renders operation more difficult and dangerous. All the advantages lie with operation between the attacks. In an operation during an acute attack the prognosis is worse. In operating between the attacks it is rarely safe to do so in less than two weeks after an acute attack. McBurney was formerly more willing to operate during the attack than he is now. The chief cause of death is delay of one sort or another. In abscess cases the sooner we operate the better.

The Operative Treatment of Cancer of the Rectum.

Dr. James Bell (British Medical Association, Sept. 3d, 1897,) stated that this is a subject of great promise, but it finds scant mention as yet in surgical text-books. Nevertheless, the removal of any portion of the rectum is now a feasible surgical operation by the sacral route. An early, thorough removal of cancer of the rectum enables one to give as favorable a prognosis as a similar operation in the breast. Glands in the mesocolin are often palpable when no cancer of the rectum exists, so the presence of these glands is not necessarily a contra-indication to operation.

In a large majority of cases of high cancer of the rectum, the symptoms are slight or wholly absent, and early diagnosis is therefore difficult. Electric lighting and inspection of the rectum offers the surest means of diagnosis.

Cancer of the rectum has been removed by the abdominal route, and the two cut ends of the bowel approximated with success; but this is possible in very few cases, and the same is true of the vaginal method. The majority of these tumors should be attacked, therefore, by the sacral method. The reader said he preferred Heinecke's incision. Several practical points were discussed.

1. Previous colostomy is desirable, both to complete the diagnosis, to keep feces for some days away from the rectal wound, and to make a permanent outlet for feces if at operation it should be found necessary to leave an open wound.

2. There are three essentials necessary to the operation itself—absolute cleanliness of the wound, freedom from tension of the cut edges of the bowel, and a perfect suture. The fear of stripping off too much of the mesocolon is an exaggerated one; there is little danger of sloughing if tension is avoided.

3. There should be no hurry in closing the colostomy-wound, as it is better to wait some weeks or months even, until the danger of recurrence has somewhat passed.

Statistics are unreliable as showing the exact percentage of cures, but it is safe to predict that further experience in technic, and especially an earlier diagnosis and operation, will give a higher percentage of recoveries than has yet been obtained.

The Dangers of Chlorate of Potassium.

A notion is prevalent among the public that chlorate of potassium is a remedy which may be safely indulged in to an unlimited extent, but it is high time that this dangerous error should be exposed. Therapeutists are well aware that even in comparatively moderate doses chlorate of potassium is a very active drug, producing a marked effect upon the blood, which it turns brown, and leading in large doses to cardiac paralysis, albuminuria, and death. Instances of this sort are not very rare, and but a few days ago a young man at Morpeth died from sucking pellets of the drug with the object of preparing himself to sing. He absorbed altogether two-thirds of an ounce, causing death from syncope. Even in what are considered safe doses chlorate of potassium often gives rise to great mental and physical depression, insomnia, and various other disturbances of the human economy.

Practical Evidence.

I used your sample of Resinol on myself for Pruritus Ani, which has been my curse for several years, defying all applications. The first application proved efficacious, and I am now using and prescribing Resinol for the above and several other itching troubles. In fact, I think it is the best remedy I have ever used for the diseases for which it is recommended.

H. B. LEIGHTON, M.D., Boston, Mass.

I have used your Resiuol in Inflammatory Rheumatism with happy results. Hope others will try it. I know they will be pleased.

E. J. BURNSIDE, M. D., Phila., Pa.

It gives me pleasure to say that Resinol is the best application for local treatment of Eczema I have ever used. I can also bear testimony to its efficacy in Erysipelas, and its soothing and healing virtues in all inflamed surfaces.

A. S. FRENCH, M.D., Lawrence, Mass.

It is but just that I should attest my satisfaction with the use of Resinol. It is a marvel of efficacy in Pruritus Ani. In relief of soreness, due to scalding from acute Nasal Coryza, it acts like a charm.

J. H. THOMPSON, M.D., Goshen, N.Y.

Resinol is by far the best application I have ever used in a practice of 48 years for the diseases recommended. A case of Eczema commencing on the scalp and extending over the entire face and which had been under the treatment of various physicians with no apparent benefit, was completely cured by it in less than two weeks.

J, J. WORTHY, M.D., Lavalle, Wis.

I am very much pleased with the effects resulting from the use of Ung't Resinol in cases of Itching Piles, Pruritus Ani, and Vulvae, Eczema, Erysipelas, &c. In fact it is the remedy "par excellence" in all cases where there is a Congested or Hyperaemic condition of the capillary Blood Vessels. C. D. SMITH, M.D., Atlanta, Ga.

I frequently prescribe Resinol, and am well pleased with its work. It has proved very useful in many forms of eruption of the skin, and especially so in Pruritus Vulvæ or Ani, and in Eczema of other parts of the body.

LUCY HALL BROWN, M.D., Brooklyn, N. Y.

I take pleasure in stating that I have found Unguentum Resinol almost a specific for Pruritus Ani, Itching Piles and Marginal Eczema.

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Resinol is a harmless antiseptic and a true skin anæsthetic, absolutely non-irritant and non toxic (free from lead, mercury, or cocaine), can be applied to mucous, excoriated or denuded surfaces of any extent at any age without fear of untoward results, and is not contra-indicated by any internal medication that may be deemed advisable.

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Sample sent **free** on application, or one regular size jar for trial on receipt of 25 cents.

RESINOL CHEMICAL CO., Baltimore, Md.

A Further Report on the Treatment of Fibroids of the Uterus by Vaginal Ligature of the Broad Ligament.

Dr. Martin, of Chicago, (British Medical Association, Sept. 3d, 1897,) states that the operation was first proposed five years ago, its object being, first, to cut off the blood supply to the tumor, and, secondly, to alter the nerve supply of that organ. After describing the technic as practised by him at the present time, he enumerated the following points in favor of the operation: (1) From the standpoint of its mortality it is a minor operation. The patient can leave her bed at the end of a week; there is no shock attendant thereon; nor is there a protracted convalescence. If the method fails it can do no harm. (2) It does not destroy the family relation. Women can conceive after its performance. (3) It is applicable in desperate hemorrhagic cases in which a more radical operation cannot be performed at the time, and does not prevent resort to this if subsequently necessary. (4) It can be employed in cases in which such complications exist as to contraindicate a radical operation, as cardiac or other organic disease. (5) It may be employed in all cases in which the patient objects to the abdominal operation on account of the scar, or when she fears the shock of the greater operation. (6) It is of use in all cases in which the tumor is not of burdensome size and is associated with profuse bleeding. It is not applicable in pedunculated tumors of the submucous or subperitoneal variety.

Physicians make a mistake in not specifically prescribing peculiar diets for patients suffering with ailments which are only amenable to treatment by regulation of the food. Doctors are prone to carelessness in this matter and often give orders which are only properly carried out by one who knows the component parts of each article of the patient's food. Flours which can be prepared by the household cook for the food of the dietetic and dyspeptic are now put on the market by Farwell & Rhines, the millers of Watertown, N. Y. Their "Diebetic Flour" and "Dyspepsia Flour" are prepared, as their names show, with special reference to these conditions and merits the attention of physicians. The palatability and value of these and of their Barley Crystals can best be determined by a trial for which the manufacturers will supply the material on request.

Effects of Alcohol on the Mind.

It is one of the curious errors that alcohol stimulates the imagination, and gives a clearer, more practical insight into the relation of events of life. The whirl of thought roused up by the increased circulation of the blood in the brain is not imagination; it is not a superior insight or conception of the relation of events, but is a rapid reproduction of previous thoughts, soon merging into confusion. The inebriate never creates any new ideas or new views; all his fancies are tumultuous, blurred and barren. The apparent brilliancy is only the flash of mania, quickly followed by dementia. Alcohol always lowers the brain capacity, and lowers the power of discriminating the relation of ideas and events. After a few periods of intoxication, the mind under the influence of spirits is a blank blurred page. The poets and orators who are popularly supposed to make great efforts under the influence of alcohol only repeated what had been said before in a tangled delirium of expression. The physicians who are supposed to have greater skill when using spirits have paralyzed their higher brain centres, and have lost all sense of fear or appreciation of the consequences of their acts, and hence act more automatically, simply doing what they have done before without any clear appreciation or discrimination of the results. The inebriate is the best of all imaginative persons, and the one in whom the higher brain forces of judgment, reason, and conception are the first to give way. The man who uses spirits to give mental force and clearness is doing the very worst thing possible to destroy this effect. Alcohol is ever and always a paralzant. It never creates anything; it never gives strength or force that did not exist before; it never gives a clearer conception and power of execution, but always lowers, destroys, and breaksdown.

Antitoxic Milk.

E. W. Saunders states in the Medical Mirror that the past year has witnessed an unabated interest in the study of the treatment and prophylaxis of diseases by antitoxic serum, and this has led to the further development of the subject: the proposed employment of antitoxic milk. The well-known immunity of the suckling to many diseases has been proved to be not inherent in the young organism, but due to the antitoxic value of the breast milk. Brieger long ago discovered that the milk of goats immunized to tetanus was antitoxic to the disease, and lately it has been found that young mice are rendered immune by the milk of an immunized mother. It is interesting to note that the milk of a nursing woman suffering from typhoid fever has the same agglutinating power as her blood, by Widal's test; also that her nursling's blood possesses the same property.

The possibilities in the direction of treatment by antitoxic milk are great, but in order to attain them we must first emancipate ourselves from the bondage of sterilization, and put before us the goal of original sterility in the milk supply for infant feeding.

Dr. Theo. W. Peers, of Topeka, Kans., says: I desire to report two cases in which I used Papine with very gratifying results. The first case was that of a man suffering with a non-operable case of epithelioma of the left side of the face. He had been operated on by a surgeon here, but on recurrence of the disease went to a "cancer doctor," who used a paste which "burnt" out a large amount of tissue, and started up a very rapid growth of the tumor.

When he came into my hands, in October, 1895, the disease was so extensive that to make him comfortable was all I could hope for. Morphine, cocaine and codein were tried, but with such distressing after-effects that they had to be abandoned. I then began using Papine, and two to four doses a day of a teaspoonful each kept him comfortable, with absolutely no unpleasant after-effects and with no increase in the amount given per day. The rapidity of the growth was decreased so that he lived until June, 1896, whereas, when I first saw him I did not think he could live three months.

The other case was one of probable tubercular peritonitis, I used it for six months with no after-effects, and always with relief to the patient. I know of no other anodyne that could be used for so long a time without unpleasant after-effects and without increasing the dose.—*Gaillard's Medical Journal*, Sept., 1897.

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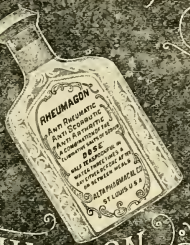

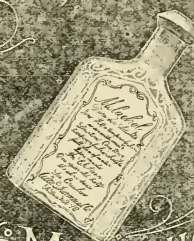

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SEND FOR LITERATURE.

Calomel in the Dropsy of Cardiac Patients

Dr. Landau considers calomel the best cardiac diuretic, if given in suitable doses and for a sufficient length of time. (Treatment, Aug. 26th, 1897). Under these circumstances he states that it works admirably, even in cases in which digitalis and caffein have proved useless. Landau gives calomel in severe cases of dropsy due not only to valvula disease, but also to cardiac failure from fatty degeneration, atheroma, and myocarditis. He obtained his best results in fatty heart, and regards it in these cases as a specific, as it not only causes profuse diuresis, but causes the absorption of fat. When using calomel as a diuretic he gives it for six to eight days in about one-grain doses, five times in 24 hours, at intervals of three to four hours. As a vehicle he uses capsules of starch paper, as the drug is less likely when thus administered to cause stomatitis. Profuse diuresis is stated to set in as a rule on the fifth day, and to amount to six to twelve litres in 24 hours. When this occurs, however, Landau states that calomel should not be abandoned, but continued till dropsy quite disappears. On the sixth or seventh day, when diuresis is fully established, infusion of digitalis may be prescribed with additional benefit. If the dropsy has not disappeared after the first course (eight days) the treatment may be repeated after a pause of eight days. Thirst usually accompanies the diuresis, and may be allayed by sucking pieces of ice. The large consumption of fluids should be avoided. Mild stomatitis, gingivitis, colic, bloody stools, hoarseness, etc., need not, according to Landau, interrupt the calomel treatment. Should, however, diarrhœa be severe, the dose may be reduced to three or four powders a day.

The conclusion Landau draws from his experience is that calomel is not so dangerous a drug as is usually stated, and that in disease which threatens life mild intoxicant symptoms must be borne to secure ultimate benefit. He states that he tells his patients beforehand that these symptoms may arise, and that few hesitate to submit themselves to treatment. Landau quotes Finkelstein as stating that the improvement thus attained is not lasting; that in two or three months the treatment has to be undergone again; and that, after a second or third course, the patient becomes habituated to the drug, which ceases to influence him favorably. Landau agrees with Finkelstein in this matter as regards valvular disease and myocarditis with atheroma, but states that in fatty degeneration of the heart he knows patients who have submitted to treatment five or six times without becoming used to the drug, and mentions such a case, in which the patient has, in the course of three years, undergone the treatment eight times, and at the time of Landau's writing is stated to have felt quite well.

The reaction against the use of calomel, like that against venesection, has probably been carried too far. Of the utility of moderate doses of calomel in cardiac failure, in association with other treatment, there is no question, but the interest of Landau's communication consists in his positive statements as to results in cases which have baffled treatment by other means, and in the fact of these results having only been attained by such a use of the drug as might, in current opinion, be regarded as unwarrantable.

Duration of Whooping-Cough Infection.

Dr. Weill expressed the opinion three years ago that whooping-cough is contagious only during the catarrhal stage; and has since put his opinion to severe tests. On various occasions he permitted nearly 100 young children, who had not previously suffered from whooping-cough, to be associated in the same ward for twenty days or more with children suffering from the disease during the stage of whooping. In only one case was the disease contracted, and in this instance the patient from whom the infection was derived was in the very earliest period of the whooping stage. In three small epidemics Weill was able to satisfy himself that infection was contracted from children who had not yet begun to whoop. He concludes that infection ceases very soon after the characteristic whoops commence, and that therefere in a family it is not the patient wko is already whooping, but his brothers and sisters who have not previously had whooping-cough who ought to be isolated.

The usefulness of good Hypophosphites in Pulmonary and Strumous affections is generally agreed upon by the Profession.

We commend to the notice of our readers the advertisement on page 396 of this number. "Robinson's Hypophosphites," also "Robinson's Hypophosphites with Wild Cherry Bark" (this is a new combination and will be found very valuable) are elegant and uniformly active preparations; the presence in them of Quinine, Strychnine, Iron, etc., adding highly to their tonic value.

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A valuable Renal Alterative and Anti-Lithic agent of marked service in the treatment of Cystitis, Gout, Rheumatism, and diseases of the Uric Diathesis generally.

DESCRIPTIVE LITERATUE UPON APPLICATION.

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Medicinal and Surgical Aspects of Anæmia.*

In calling the attention of the members of the Society to this subject, I do not do so with the intention of submitting for their criticism an original idea or prescription, but to those who are confronted with the vexatious question, "How can I best prepare my anæmic and exsanguine patient for the anæsthetic for a surgical operation when such a condition is due either to traumatism, organic or functional disturbances?" I desire to present for perusal a series of facts gained by observation and experience, and trust such facts may prove both interesting and instructive to my younger professional friends who have, perhaps encountered and been accustomed to treat medicinally and surgically such cases that have presented a clinical picture differing in many material results, which at times seem epidemic in character, especially during the recent years, since the visitation of the grip and its varied sequelæ. While anæmia and chlorosis seem to be truly periodically epidemic, they must be due to some known or unknown pre-existing cause, of a specific influence, that is often puzzling to the general practitioner, for such a case may not accord with his or her previous experience, as they are frequently ushered in by an *apparently* unknown cause. Cases that present themselves for operation are oftentimes in such a physical condition as to greatly embarrass an operation by such as anæmia or chlorosis, either due to traumatism, organic or functional derangements. Pulmonary tuberculosis is frequently an obstalce to an operation, which, if performed and the tumor removed, would prolong the life of an unfortunate patient, yet the depleted system will not even permit of anæsthesia, to say nothing of an abdominal operation.

First.—If we can place our patient in comfortable sanitary surroundings, where pleasure and comfort are combined with regular but not fatiguing exercise in the open air. Gymnastics, horseback riding, walking, swimming and similar exercises, all have advantages as adjuncts to the treatment of anæmia and its allied diseases. The judicious use of the bicycle, with the handle-bars well raised to prevent the stooping position, may prove beneficial. Violent exercise predisposes to hypertrophy of the heart, whether taken on the wheel, on horseback, or walking. Exercise and its character should be accurately prescribed and applied with reasonable regard as to causation of the anæmic condition.

Sponge bathing, followed by gentle friction daily, under the supervision of a trustworthy nurse, noting duration and temperature on bath, avoiding the so-called medicated soaps, many of which are worse than useless; cold sea bathing in chlorotic and anæmic cases is contraindicated, at least for some time after exposure to the sea atmosphere; then they should never bathe fasting, and should not take the plunge daily, the bath never lasting longer than five or ten minutes. The hot and cold alternate baths have been highly recommended, and are still advocated by many of our prominent practitioners, who consider them *par excellence;* to such as present faulty circulation they are efficacious. It has been demonstrated by experiments that hot water enhances the potency of antiseptic substances, and physiological researches con firm my statements. For illustration, we have repeatedly observed how bathing with hot water alleviates pain and limits the inflammatory process. It would take too long to deal exhaustively with the numerous medicated baths, so I confine my attention to simply heat and cold.

Second.—Absolute freedom of pressure of clothing, especially that constricting the chest and abdomen, thus allowing uninterrupted circulation and respiration. Uniform weight of underwear, with additional weight to the outer garments as the temperature demands.

Third.—Diet.—To the fairly healthy person who can supply himself with the food desired, the demand of the appetite affords the truest guide for both quantity and quality. A mixed *regime* of animal and vegetable foods is the natural diet for man. To our anæmic cases we recommend that representing the most nourishment, such as milk, bread, beef, mutton and fowl; in fact, any containing a large percentage of albumin; of the vegetables, spinach, lettuce, celery, potatoes and sweet fruits in abundance. It is quite impossible to give iron-clad rules as to what and when food should be taken; the peculiarity of the individual must be self-demonstrated, which rule will also apply to drinks and seasons of the year.

These few general suggestions will apply to anæmia from the medical standpoint. The exsanguine variety, such as may follow hæmorrhages, also capital operations, as in accidents necessitating amputation where the loss of blood is alarming, although bearing a close relation, is not identical in causation, and differing somewhat in treatment also may be called transitory in character.

*Dr. W. H. Pierson in The Hahnemannian Monthly, July, 1897.

I ask, is it not sometimes a difficult task to combat and compensate for this loss, which is often called shock, when it is nothing more than a depleted system from loss of blood?

Among the foods were not mentioned the animal extracts, as well as the many so-called tonics, which I choose to classify as foods. How frequently are we called upon to apply quinine in appreciable doses to our rapidly-declining patients, when our china and arsenicum refuse to respond? The great and primary indication for quinine is a history of malarial origin, with a fever of more or less persistency. This, like many other valuable remedies, although curative agents of the primary cause, are often unsatisfactory in the completion of recovery and do not remove the effect. Preparations of iron are of invaluable assistance. Among the most prominent may be cited: Hensel's Tonicum, Liquor Ferro-Mang. (Dietrich), Ferratin, Bland's Pills, and the admirable preparation known as Gude's Pepto-Mangan. The equivalent of iron annually fed to people in the United States might be fairly stated to equip a small foundry, although the paramount difficulty with it and its preparations has been to establish proper assimilation, as its reputed tonic properties are to carry oxygen to all parts of the system. During the last decade many efforts to combine iron and manganese have met with failure. The almost insurmountable difficulty has been to properly free the inorganic metal salts that produce both stomach and bowel disturbances, thus excluding this food-medicine from our category of tonics. It is stated by a well-known writer that iron as a rule appears quite useless in the majority of these cases, and further states that he has frequently seen the percentage of red-blood corpuscles gradually diminish during its administration, and very materially increase when arsenic was employed. Phosphate of iron will many times appear to be indicated to repair the loss caused by long sickness or following an operation. The apparent difficulty is to properly compensate the system for its loss of oxygen and other ingredients making up the red-blood corpuscles. To this end my experience and observation have led me to rely upon the preparation of iron and manganese known as Gude's Pepto-Mangan. To properly introduce this preparation into the system means more red blood—it does not absolutely depend upon the diminished accretion or the increased elimination of calcium salts, for it is plainly manifest that the effort is primarily to convert the abnormal combination to the normal for the proper support of the body and its organs. With the various preparations of iron, experimentally employed, through some years of clinical observation, I am convinced of the efficacy of Pepto-Mangan (Gude), which is a unique and prepotent digestive agent, is also prompt, reliable and pleasant, and possesses the elements necessary for the production of red blood, which has been fully demonstrated by clinical tests in the various forms of anæmias, which must appeal to the intelligence of the thoughtful physician and surgeon as essential in the successful treatment of this class of cases. I beg to narrate one or two cases of the many where this preparation was employed previous to and following operations.

Maggie M., age 30; married, but divorced from her husband; presented a very anæmic appearance, thready pulse, murmurs of the heart and jugular, loss of appetite, and complaining of great pain in the right illiac fossa, which upon examination revealed a cystic tumor as large as a child's head. The urine was found to contain granular casts and a quantity of albumin. I called a consultation, and it was deemed advisable not to attempt an operation upon the woman in this condition, as she would certainly die on the table. I prescribed Gude's Pepto-Mangan, dr. two, in sherry, four times daily, and in one month her condition had improved so that I operated and removed the tumor, and in thirty days had the pleasure of discharging my patient, fully recovered.

Case II.—Nellie M., aged 36; family history good, with the exception of one brother died of acute phthisis, following pneumonia. First menstruated at thirteen years and was regular until sixteen years, when she had scarlet fever. From this time her menses were erratic and always accompanied with great pain, more especially in the left ovarian region. One day she was thoroughly drenched by being exposed to a rain storm during the menstrual period, and did not again menstruate for a long time—she estimated about four years. Her appearance was decidedly anæmic, great depression in spirits, and wished for death to end her sufferings. Her case was diagnosed as a hydro-salpinx, and an operation agreed to as soon as her condition would warrant. She was placed upon Gude's Pepto-Mangan, with absolute inactivity for two months, when an operation was performed, which proved to be an hæmtosa salpinx. Her recovery was uneventful, although necessarily slow, owing to her emaciated condition. I am pleased to report her now in good health and menstruating regularly.

Syphilitic Ulcerations.

The ulcerations resulting from the breaking down of pustular, tubercular and gummatous syphilides are frequently of a rapidly destructive character, and exceedingly rebellious to treatment. Aside from the internal use of mercury and potassium iodide it is usually necessary to resort to local applications, and of the numerous topical remedies recommended, the most prominent place is now assigned by many dermatologists to europhen. From a study of this drug Dr. J. A. Cantrell, Professor of Diseases of the Skin in the Philadelphia Polyclinic (American Therapist) writes as follows regarding its utility in ulcerations of syphilitic nature:

"Eichhoff reached conclusions in favor of its action in syphilitic ulcerations after dusting these cases with the dry powder, while Migneco records excellent results also in ulcerating gummata, and Shoemaker by employing it both in 10 per cent. ointments and as a dusting powder in like ulcerations. Gottheil reached similar conclusions in regard to the use of this agent in ulcerations due to syphilitic infection, while Oeffelein and Neuberger in a joint paper, publish effective cures and later Ullmann records similar experience.

"Gilbert refers to beneficial effects in varicose ulcers of the leg which were dusted with the powder at night, and dressed with a 2 per cent. ointment during the day time, and in which granulations soon formed with cicatrization in three weeks. According to experiences gained during the time in which this agent was given trial in my clinical and private work, I am inclined to believe that Europhen is of some value as in the dressings applied to syphilitic variety of ulceration, the treatment assisting greatly in restoring the parts to their normal condition. By using dusting powders in varying strengths and with the assistance of the iodide of potassium internally, results were reached usually in about two or three weeks, at first, by simply applying the powder until the granulations were noted, and then making a change to an ointment, it was found to act mpre beneficially in this manner. In all the experiments it was noted that the result was gained in a much shorter time than with most of the iodine derivatives. In the non-syphilitic abrasions or ulcerations the drug acted similarly and with the change from the powder to the ointment, the effect of the drug was greatly enhanced. But care must be exercised that at the time in which granulations seems to be showing, a change is made to an ointment; because if not done at the proper time, one will be confronted with an overabundant formation of healthy tissue, which is greatly to be deplored on account of the manner of treatment necessary for its removal which may be detrimental to the result already achieved in the former dressings."

Elixir Iodo Bromide of Calcium Compound.

C. A. Bryce, A. M., M. D., Professor of Surgery in the National College, Indianapolis, Ind.; Surgeon-in-charge "The Hickories," Editor Southern Clinic, Author "Bryce's Practice of Medicine," etc., etc., writes:

"There came to my office in March, 1897, a man about 28 years of age, with the most extensive multiple ulcers of the legs that I ever saw. He said that he had tried for months to get relief without benefit, and desired me to do what I could for him His legs from the knees to the ankles were swollen and infiltrated. The entire surface was undergoing destructive changes, and circle-corroding ulcers were in all stages—all of them finally cutting cleanly through the skin down to the muscle. The case was clearly one of the late manifestations of syphilis implanted upon a scrofulous base. Locally, I used a cleansing and gently stimulating, protective treatment, and placed the patient upon Elixir Iodo Bromide of Calcium Compound (Tilden), which he continued to use without intermission for over two months, with the result of effecting a complete cure. I gave him positively nothing at any time but the Elixir Iodo, and attribute his cure entirely to its great alterative properties and special adaptability to cases of this character. The results were simply astounding. I have used Elixir Iodo Bromide of Calcium Compound (Tilden) in a case of Syphilitic lung involvement, curing the patient after he had been given up to die by an excellent practitioner."

Backache.

It is with pleasure that I give you my experience with Sanmetto. Mr. B., age 49 years, was a sufferer for years from backache, caused from inflamed and overworked kidneys. The pain was so great at times that an opiate had to be given to relieve it. I put Mr. B. on Sanmetto, teaspoonful three times a day. He has never complained of his back since. This has been three months ago. J. Harvey Bledsoe, M. D.

Gold Hill, Ala.

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The Dietetic Treatment of Diabetes.

Dr. Robert Saundley, of Birmingham, England, at the Montreal meeting of the British Medical Association, presented a paper with this title. He said:

The usual diabetic diet, with its rigid restrictions, can only be carried out by the doctor's authority and the patient's docility. Compromise is the rule, but it is arrived at by the doctor's opinion being sacrificed to the exigencies of the patient. Diebetes mellitus is a clinical group, of which the cases and proper classification are debatable, and on that account variations prevail on views of treatment.

Glycosuria is an abnormal phenomenon, and occurs when the amount of carbohydrates ingested exceeds the utilizing capacity of the body. This capacity varies in different individuals and perhaps in the same person at different times. Those who become easily glycosuric from slight excess stand in close relationship to the milder form of diabetes. In severe cases of diabetes, glycosuria persists even on flesh diet, a fact explained by the formation of carbohydrate molecules when albumen is converted into urea. Hence, in severe diabetes, there is no physiologic reason for persisting with strict diet in the hope of thereby removing the glycosuria.

We must look to clinical results in the hope of justifying our treatment and must not be led too far by our pre-possessions in favor of any disputed pathologic doctrine. Instead of following blind routine, we should give each patient as great a quantity of carbohydrates as experience shows can be assimilated. The following daily allowance will be suitable in an average case: Milk, 1½ pints; baked potatoes, 6 ounces; levulose, 1½ ounces, and in mild cases, 4½ ounces of dry toast. Fat bacon may be allowed at one meal, if tolerated, but diabetics absorb fat badly. Alcohol, in the absence of albuminuria, may be allowed in quantities up to 4 ounces, especially if taken with dilute mineral acids. It is of great importance to prescribe definite quantities, and to test the effect of the diet by weekly body weighing, measurement of the urine, and estimation of the sugar, the first of these being the most important.

To the Medical Profession.

It has recently been brought to my attention that several manufacturers have placed on the market certain preparations as substitutes for Aseptolin, which have manifestly not been made strictly in accordance with my formula, and an analysis fully proves. These defective solutions have not only failed in accomplishing the relief or cure of the patient, but in many instances have caused abscesses and other harmful results. I must not be held accountable for these evils which directly result from the defective compounding of the preparation. The only preparation compounded strictly in accordance with my formula, is "Aseptolin-Edson," prepared by the Asepta Chemical Company of New York, under my personal supervision.

(Signed) CYRUS EDSON.

Dated New York, October, 1897.

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Intra-Nasal Diseases.

Speaking of Unguentine, we have found it an excellent application to the nose after the removal of spurs of the septum or anterior hypertrophies by either the saw, snare or cautery. Frequently the crusty scab which forms is the source of considerable annoyance to the patient and actually delays the healing process.

The frequent washing with alkaline solutions renders the tissues boggy and even then is not always effectual. A small pledget of cotton with the ointment applied to one side and placed in situ will promote a more rapid healing of the nasal tissues than any other method with which we are familiar. After a few hours a bit of the ointment may be applied frequently and the abraded surface kept comfortable as well as clean during the healing process.—*Atlantic Medical Weekly.*

Preventing Yellow Fever.

During the yellow fever epidemic in the autumn of '88, Savannah, Ga., entirely escaped, which was due to the thorough sanitary precautions taken, as is evidenced by the following from the City Health Report:

"Domestic cleanliness and the liberal use of reliable disinfectants were constantly urged, and to assist every householder in this matter the Board of Health gave freely to all callers such disinfectants as were needed. For indoor and general household use, 'Platt's Chlorides' was the disinfectant recommended and employed, and many thousands of bottles of it were used.

The result was, that during the period above mentioned the healthfulness of our city was exceptionally good."

Signed,

W. Duncan, M. D., Chairman Health and Cemetery Committee.

W. F. Brunner, M. D., Health Officer, and Secretary Board of Sanitary Commission.

Frank E. Rebarer, Clerk of Council.

Sanmetto in Enuresis Nocturna.

Mrs. H. M. Robertson M. D., of Middleport, N. Y., writing, says: "I have just received a letter from the mother of the girl to whom I gave the Sanmetto for nocturnal enuresis, and she assures me that her little girl has no more trouble of that kind, nor has had for some time, so thinks she is cured. I feel sure this case has been cured by Sanmetto, for it was an obstinate case, and did not seem to yield to anything before I gave her the second bottle of Sanmetto, although I had tried all the usual remedies. I believe in giving credit where it is due."

The Treatment of Exophthalmic Goitre.

Two papers recently read at the Paris Medical Academy on exophthalmic goitre have excited considerable interest in the medical profession. Concerning the surgical treatment of the disease, M. Doyen in his paper confidently affirmed that removal of the thyroid body is the only treatment to be adopted. This he characterises as a simple, easy, and not dangerous operation, one which ought to be effected in ten minutes without any preliminary precautions to arrest hæmorrhage. The patient must be kept two or three days in bed. M. Doyen considers section of the cervical sympathetic a dangerous and useless operation. M. Poncet and M. Jaboulay hold quite a different theory, and consider all surgical treatment of the thyroid body dangerous, and that it does not always give good results. Moreover, they affirm that most surgeons hold the same views.

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In a recent circular Messrs. Parke, Davis & Company state: "We have introduced Liquid Taka-Diastase to meet the demands of those who object to both powders and capsules. In order to satisfy such patients, we know of several instances where solutions have been prepared extremporaneously, but with medicaments or vehicles with which Taka-Diastase is incompatible. Of course, failure in such instances was unjustly attributed to Taka-Diastase. Liquid Taka-Diastase will in future, however, most satisfactorily take care of all such cases.

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——— ———, M.D.

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DR. J. M. HAYS, Greensboro, N. C.,
Medical Examiner for the State, March 19th, 1896.

"I feel constrained to report to you the almost magical effects of your treatment for tuberculosis in my hands. In one of my cases, her neighbours and friends think a miracle has been wrought, and she would certainly never have left her bed alive, but for this treatment, I feel sure."

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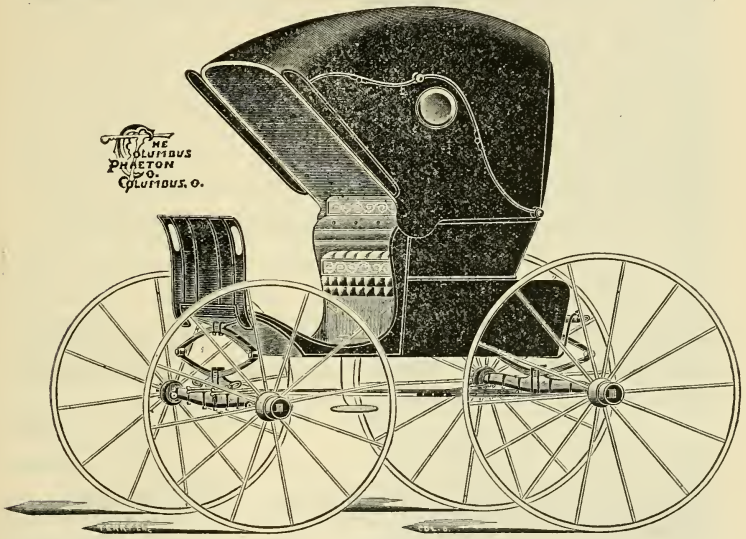

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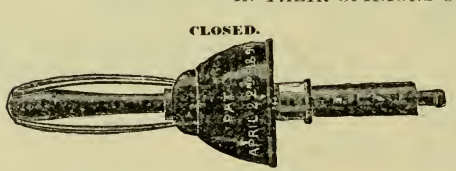

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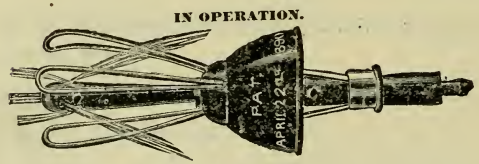

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The Charlotte Medical Journal.

VOL. XI. CHARLOTTE, N. C., NOVEMBER, 1897. No. 5.

Medical Ethics.*

By SIMMONS B. JONES, M. D., Charlotte, N. C.

Having nothing original to write about, there being nothing, so far as I know, of startling interest agitating the medical world at present, not wishing to be derelict in my duty to the Society, I cast about for something of general interest to a young medical organization, such as ours. I thought it might not be out of place for one of the board of censors to take as his subject Medical Ethics—a subject as old as medicine, and one more necessary now than ever in the history of the profession in the South.

I will begin by saying I had abandoned the former organization of this kind formed in Charlotte, not in anger, but in disappointment, because it was not governed by the code of medical ethics. I have joined this new organization in obedience to the will of the reputable men of the profession, because I thought it my duty to help in the elevation and purifying of our noble profession in the city of Charlotte. This object can only be obtained by strict obedience to the letter and spirit of our code.

If this society is only to be a combination for the promotion of our selfish interests, a sort of brotherhood for the collection of debts, and for managing the unwilling and impecunious, it will fail, for we are too weak, too poor, and too few, to combine against the public. But if, on the other hand, a medical revival has taken place, and the physicians have resolved with earnest hearts to forget self, and work for the honor and glory of the noblest of all human occupations, then our efforts will be crowned with a glorious success.

Dr. Watson says: "The profession of medicine is a noble profession and worthy the devotion of a life time. Trials belong to it and difficulties, but it has also privileges and immunities peculiar to itself affording ample scope for the intellect.

It is conversant with objects that tend to elevate the thoughts, to chastise the feelings and touch the heart. It brings beneath our notice that most remarkable portion of matter which is destined for a season to be the tabernacle of the human spirit, and which, apart from that thought, excites increasing wonder and admiration the more closely we investigate its marvelous construction. The sad varieties of human pain and weakness, with which our daily vocation is familiar, should rebuke our pride, while they quicken our charity. To us are entrusted in more than ordinary measure opportunities of doing good to our afflicted fellow creatures, of showing love to our neighbor.

Let us beware how we idly neglect or selfishly abuse a stewardship so precious, yet so weighty. The profession of medicine having for its end the good of mankind knows nothing of national enmities, of political strife, of sectarian dissensions. Disease and pain being the sole conditions of its ministry, it is disturbed by no misgivings concerning the justice and honesty of its clients cause, but dispenses its benefits without stint or scruple to men of every country and party and rank and religion, even to men of no religion; and like the quality of mercy it blesseth him that gives and him that takes. Familiar with death in its manifold shapes, witnessing from day to day its sudden stroke, its slow but open siege, its secret but insidious approach, we are not permitted to be unmindful that our own stay is brief and uncertain, our opportunities precious and our time very short."

Practiced in this spirit, medicine is indeed a noble profession and worthy the devotion of a lifetime, and worthy to excite the admiration and devotion of men; but practiced in the modern commercial spirit, now so common, (and practiced without a restraining code) it becomes the lowest and meanest of trades.

If a gentleman gives an injection not to relieve pain and relieve the patient from danger but merely does so much menial service for a dollar, he is on a lower level than a scavenger. If an educated man uses the tactics and intrigues of a quack to lure victims into his net he is an imposter of the lowest and worst order. The rules of Medical Ethics are not mysterious rules, begot in secret, but merely the rules of fairness toward the public and good manners toward each other.

I wish only to discuss a portion of this matter to-night, the subject being too broad to go over in a single night. Section 1, article v, Code of N. C. Ethics, says: "Medicine is a liberal profession and those admitted into its ranks should found their expectations of practice upon the extent of

*Read before the Charlotte Medical Society, September 14th, 1897.

their qualifications, not on intrigue or artifice."

This means that we must not advertise our attainments, no flaming accounts of surgical operations with all the proper technical terms, and a compliment to the skill of the operator should appear in the daily paper, no relics of an operation should be exhibited in a public place with the names of the operators.

No physician should take an inventory of anothers practice with a view to finding means of winning them to himself; no physician should make of religion or any order or society a means to force himself into practice. He should stop any friend or well wisher who goes to a particular sect or society and says: "This man is a brother Baptist, or Knight of Pythias, &c., therefore you ought to employ him."

It means that when a physician comes to a new place, or when he begins his career, is absolutely debarred from using the methods of a racket store or a quack doctor. It means also that he should not make use of secret ways to trample on the rights of another practitioner.

If called into another physician's case, he should not smell the bottles and shrug his shoulders, nor ostentatiously pour out the contents, or say, "it is good, but too strong for a child's stomach." Intimating if *he* had been called at the start the child's stomach would never have been eroded and vomiting set up, with that bugbear of the masses, "strong medicine."

Section 2, article v, says: "A physician in his intercourse with a patient under the care of another practitioner should observe the strictest caution and reserve. No meddling inquiries should be made, no disingenuous hints given relative to the nature and treatment of his disorder, nor any course of conduct pursued that may tend to diminish the trust reposed in the physician employed." This debars a physician from going over to a house when the baby is sick teething, or is suffering from a want of digestion and assimilation, and saying to an anxious mother, already worn out for want of sleep and anxiety of mind, "the baby grows thinner—they say Dr. Blank believes in the starvation theory. I saw a case like your baby last week and put him on so and so, and he has only two good actions a day and has gained a pound." This section also prevents a physician from sending his wife to do any of these offices for him.

Section 3, article v, says: "The same circumspection and reserve should be observed when, from motives of business or friendship, a physician is prompted to visit an individual who is under the direction of another practitioner. Indeed, such visits should be avoided, except under peculiar circumstances, and when they are made no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit."

This section debars a physician from going all over the town and country and sowing the seeds of discontent which he hopes will ripen into a change of physicians, or at least a consultation.

Section 4, article v: "A physician ought not to take charge of or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the cases or been regularly notified that his services are no longer desired. Under such circumstances no unjust and illiberal insinuations should be thrown out in relation to the conduct or practice previously pursued, which should be justified as far as candor and regard for truth and probity will permit; for it often happens that patients become dissatisfied when they do not experience immediate relief, and, as many diseases are unusually protracted, the want of success in the first stage of treatment, affords no evidence of a lack of skill."

This section deals with one of the most embarrassing positions that can happen and it requires good feeling, tact, and honesty of purpose not to work a wrong to the man who had the case. But it is imperative for the physician last called to protect the one who is dismissed with all earnestness. Don't hit the man who is down; don't stab in the back—it is mean and cowardly.

Section 5, article v: "When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be desired, to resign the care of the patient to the latter immediately on his arrival."

This is a most important section, and one often disregarded. Many of the commercial style of doctors will go into an emergency case and make it impossible for the family to send for their own physician without absolutely insulting the new man. They will say after all the necessary attention for that occasion is over, "I will come back this evening at 4 o'clock," and then, "I will look in before bedtime, and I will look in in the morning," &c. This is only worthy of a man in the rag-picking trade.

Section 6, article v, is in the same line.

The public should be taught that the

medical faculty are a set of scientific gentlemen, not a lot of tradesmen engaged in a disgraceful scramble for trade.

Section 7, article v, says: "When a physician is called to the patient of another practitioner, in consequence of the sickness or absence of the latter, he ought on his return or recovery of the regular attendant, and with the consent of the patient to surrender the case."

I would only add to the text here that during the absence of the family physician, the new physician is absolutely debarred from trying to win the practice to himself. He should not *want* the case after the return of the family physician.

No physician should offer to divide the profits of his prescriptions with the druggist, or to take a fixed sum on each prescription. This is a violation of every principle of right, and leaves the doctor under the imputation that he writes many prescriptions because he gets more money every time he makes a change.

It is pleasant to turn from these laws against bad manners, towards the public, and each other, and think of the doctor as he should be. Brave, for without courage he cannot be of much use in the profession; generous, for every day of his life calls on him to give in work and sympathy and money; unselfish, facing the heats of summer and colds of winter. In fact, the Scottish hero of Ian McLauren, Dr. McLure, is a true type of a village or country doctor. The truest friend of every one who suffers.

The Ipecac Treatment of Dysentery.

By A. Robert Taft, M. D., Charleston, S. C. Assistant to Chair of Chemistry, Hygiene and Urinary Analysis, Medical College of the State of South Carolina; Demonstrator of Anatomy, Charleston Medical School.

While I have nothing new to propose concerning this treatment, I would like to say a few words on the subject, and give the results of a few cases in which it was used, hoping to do a small part toward once again bringing into more general use this ideal form of treating a disease which, when treated by other methods is uncertain not only as to immediate results, but has great tendency to chronicity in the future. Quain says that in Ipecac we possess a non-spoliative antiphlogistic, a certain cholagogue and unirritating purgative, a powerful sudorific, and a harmless sedative to the heart and muscular fibres of the intestines.

This is high praise, but I am sure that any one who will give this a fair trial (by this I mean in heroic doses, used with proper precaution) will find it fully justified. The idea that Ipecac in very full doses is a dangerous drug on account of the prolonged vomiting and depression it is likely to produce, seems to be an erroneous one. I am sure that if it is given on an empty stomach and the patient kept in a recumbent position, it has less tendency to nauseate than when given in very small doses.

I remember distinctly when a boy at school, I was taken with a slight attack of dysentery on the morning of an important examination. Upon applying to the surgeon for something to at least get me through the day, as, of course, we were not allowed to leave the examination rooms. He gave me two capsules containing about ten grains of Ipecac, with the assurance that I would be all right. Of course a short time after taking this (I took it just after breakfast) I was seized with nausea, and such profuse vomiting, that instead of standing the examination, I was laid up in bed. The failures with Ipecac and the reason of its being so little used I would attribute to just such methods as these.

The following is the method I usually adopt. I prescribe

℞ Pulv. Ipecac..... ʒ ii
Mucil. Acac ..... ʒ ii
Syr. Auranti,..... ʒ i
Aqua ad..... ʒ ii
M. Sig. Coch. Mag- night and morning.

The nurse is cautioned that the patient must have no food for three hours before, and no food or water for at least two hours after. If the thirst is very great, small pieces of cracked ice may be sucked. The patient must, of course, be recumbent, and the mouth wiped free of saliva with a towel, as the head should not be raised. The four doses I have found quite sufficient to check tormina, tenesmus and dysenteric stools. The patient is in good condition and usually having four or five soft bile-colored stools a day. After this an ordinary chalk or astringent mixture is sufficient to do the rest. The chronic cases I have found do better on small doses frequently repeated with enemas of salt, boric acid or silver nitrate and tonics. Especially in children have I found Ipecac useful, and I always use it in proportionately large doses, ending the treatment with a combination of creosoti and chalk mixture.

In chronic cases with these as with adults I prefer to use small doses frequently repeated, and enemas, and I have gotten excellent results,

The following are notes of a few cases treated in this manner:

1st. Mrs. J., female adult, aet. 33 years, was having 10 to 15 characteristic dysenteric stools every twenty-four hours. Pains in abdomen and tenesmus. Was put on official lead and opium pill t. i. d. Second and third day no better. Fourth day was put on calomel, grs. 1-5, bitartrate of pot., grs. xx, and Dover's powder, grs. x, every four hours, and ordered to repeat every three hours if symptoms continued bad. This caused very slight amelioration of symptoms. The sixth day 30 grs. of Ipecac was ordered, and patient was warned to take precautions against vomiting. When I returned that afternoon patient had had two stools of a bilious character, whereas she had had four of marked dysenteric character between daylight and time of taking Ipecac. Ipecac had caused only slight nausea. Was ordered to repeat dose that night and again in the morning. Neither of these caused even nausea, and the one next night was taken as easily. During this day and following had two to three bilious stools and no tenesmus. A mixture of creosote and mist creta served to complete the cure on two days more.

2d. W. J., aet. 7 months, had chronic dysentery for six weeks. Had fallen into a condition of marasmus, having been under my treatment for two weeks and every available remedy tried without apparent effect. Was given mixture containing ½ grs. of Ipecac to be taken twice daily. Four days later was notified that the child was dead. Upon questioning the mother she said the child had improved wonderfully after first dose had two to three fair looking actions daily, no vomiting and seemed so much better that she thought it could eat some of the dinner that the other children had. A short time after eating it was taken with vomiting and diarrhœa, and died in a few hours. This case I should certainly consider a success for the Ipecac, for if she had stuck to the diet ordered, milk and chicken broth, in proper quantities, twice daily, and the treatment followed up with some astringent mixture, and this antipyretic, I have no doubt but that she would have speedily recovered. Ipecac frequently repeated will prevent Malarial fever for years. I had treated this patient during an attack of dysentery about six months previous, but the treatment consisted principally in starving the child in accordance with the old-time idea of the disease. Despite of this the attack lasted fully ten days, and disabused me of the notion of a short cord, for atropine and tenesmus or stools could not be controlled by treatment, although opium was increased almost every dose. The tolerance gained for Ipecac was ordered at once to be dispensed with.

3d. Mrs. J., female adult, aet. 33 years, was having 10 to 15 characteristic dysenteric stools every twenty-four hours. Pains in abdomen and tenesmus. Was put on official lead and opium pill t. i. d. Second and third day no better. Fourth day was put on calomel, grs. 1-5, bitartrate of pot., grs. xx, and Dover's powder, grs. x, every four hours, and ordered to repeat every three hours if symptoms continued bad. This caused very slight amelioration of symptoms. The sixth day 30 grs. of Ipecac was ordered, and patient was warned to take precautions against vomiting. When I returned that afternoon patient had had two stools of a bilious character, whereas she had had four of marked dysenteric character between daylight and time of taking Ipecac. Ipecac had caused only slight nausea. Was ordered to repeat dose that night and again in the morning. Neither of these caused even nausea, and the one next night was taken as easily. During this day and following had two to three bilious stools and no tenesmus. A mixture of creosote and mist creta served to complete the cure on two days more.

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morning. Next morning was reported that patient having taken dose went to sleep in about thirty minutes. Turning over violently he had an attack of vomiting, however only contents of stomach ejected, and no retching afterward and no depression. Dose that morning had been retained with slight nausea. Stools about the same. Considerable pain in abdomen, and pulse rather slow and weak. As the second dose had been given one hour before my visit, I concluded that it was too soon to judge, and ordered dose repeated that night, mustard plaster over stomach, and one-half oz. of whiskey given every four hours. That afternoon found patient feeling much better; had had only one stool, that bilious in character, no pain. Next morning no stool and no vomiting from dose night before. From this time patient steadily improved, and was dismissed two days later.

4th. J. S., male, aet. 23 years, has been having eight to ten stools containing mucus and blood, and marked tormina and tenesmus for two days. Was given 30 grs. of Ipecac that night, and ordered to repeat in the morning. At next visit found patient feeling better, almost free from pain. Had had three actions during the night. First dysenteric; last two soft and bile-stained. Took dose again that night. Next morning was up and said he was well, but had had three to four soft actions a day. Was dismissed with an astringent mixture.

Address on Medicine.*

By HENRY D. HOLTON, A. M., M. D.

The profession has of late been frequently congratulated upon the wonderful progress made in the last twenty years, especially in the science and art of surgery.

The operations which have been made possible by Anesthesia more recently supplemented by Antisepsis have made successes in the last two deoades of what otherwise would have been failures.

The laparotomies for various diseases and injuries have undoubtedly added many years of valuable life to the sum of human existence. The fact seems well established that the average of human life is many more years than it was a hundred years ago. While we are free to accord to the advances in surgical science its just amount of credit for the prolongation of life, we cannot overlook the fact that to the advances in medicine, as well as surgery are due

*Delivered before the Vermont Medical Society, Oct. 1891.

very many of the additional years enjoyed by mankind. Preventative medicine or sanitary science has had much to do, in not only rendering life more comfortable and desirable but through its efforts the mortality has been reduced in a marked degree. As a result of its teachings we find the people as a whole, better fed, better clothed and better housed. The food is not only of better quality but all food products and drinks are freer from deleterious contaminations. Foods are better cooked and the diet of many households is presented in a way to be more nutritious. Greater care is taken that the water supply shall be free from dangerous contamination. The clothing is better calculated to protect the body from the inclemencies of the seasons. The houses are warmer and more attention is given to ventilation, not only of public buildings, but also of the homes, especially the sleeping-rooms.

Again some consideration must be given to the various instruments of precision, which the physician can avail himself of today as aids in making a correct diagnosis; what with thermometers, microscopes, exploring needles, X rays and other electrical instruments we are in danger of neglecting or altogether losing the faculty of close observation which made our Fathers such wonderful diagnosticians. We may take warning from Doctor Holmes' description of the wonders of the stethescope when, (within it was the spider and the fly) and it was supposed that by its use a correct diagnosis could be made without the exercise of good sense and the observation of general conditions. It is well for us to keep in mind his closing injunction:

"Now use your ears, all you that can
But don't forget to mind your eyes,
Or you may be cheated, like this young man,
By a couple of silly, abnormal flies."

One of the most important advances which we notice is that the profession is coming out of its tent of expectancy in the treatment of diseases, into the broad open field of actual aggressive work. "The recognition of minute organisms, their study, their artificial culture and modes of growth, their secretions, their chemical changes, their likes, their antagonisms have let us into the secrets of the way in which infective maladies originate and the laws they obey."

We look to the bacteriologist to discover a germ for each malady that affects the human frame and he does not disappoint us. We ask him further to study and present to us the origin and effect of ptomaines and leucomaines and again he does not deceive us. By a knowledge of the laws that govern these minute germs and the effects of chemic changes, we are able to explain many phenomena which before could not be solved and to get clearer ideas of autointoxication, showing that in many instances we have not to search far away, for the causes that have produced the serious disturbances of the economy, which we witness, but to look within and there to find the manufactory, of the poisons, that are surely destroying the vital processes. Hence we ask for Antitoxin, for serums to render the system immune, and nucleins by which we may destroy the germs which produce the infection. Antitoxin has proven to be of value in diphtheria and hydrophobia. Of its use in diphtheria many of you have already demonstrated its value in your own practice, to some extent, although in the last few years this State has been extremely fortunate in not having a severe epidemic of the disease within its borders. I also take it for granted that you are familiar with the report of the American Pediatric Society in which they report nearly six thousand cases with a death rate of only 12.8 per cent. So widely has this remedy been used and with such satisfactory results that it would seem almost criminal to attempt to treat diphtheria without using it. We believe that the following recommendation for the use of this remedy should be observed, they are the rules laid down by this committee and have been practically endorsed by all observers. All are agreed that in cases of suspected diphtheria, antitoxin should be administered at the earliest possible moment. While it may be that there is such a thing as giving an overdose there is no authentic case reported of such an accident having occurred, in fact I doubt if any one has yet determined how much would constitute an overdose. The highest potency should be used. In laryngeal diphtheria, the patient being two years old or over, should receive as a first dose 2,000 units, in twelve or eighteen hours after the first dose, if there is no apparent improvement, or if the change for the better is only slight a second dose of 2,000 units should be given. In twenty-four hours if the improvement is not satisfactory another dose of 2,000 units should be given. If the patient is under two years the dose should be from 1,000 to 1,500 units repeated as already mentioned.

The antitoxin of hydrophobia has been so long in use and the results so well known that we need only to allude to it as one of this group of remedies.

The antitoxin of erysipelas has not as yet

been proven to be of sufficient value, for us to give it more than a passing word. It is different with Tetanus, the results of treatment of this disease by the use of antitoxin have been such that we believe every person suffering from this disease should be given the advantage this form of treatment affords. The treatment of Septicemia by various serums has not resulted with the satisfaction that was hoped and cannot be recommended until further experimentation shall have developed a serum, that shall have been proven to be of more value in the treatment of this affection than yet presented. However quite recently Dr. Courtney of Brainerd, Minn., has reported a series of ten cases treated with Nucleinic Acid used hypodermically, 2 c.cm. of a one to five per cent. solution, nine out of the ten cases recovered. It would seem that his modest conclusion should meet with a hearty endorsement. He says, "The results of my work with yeast Nucleinic Acid in Septicemia are sufficiently encouraging to justify a feeling of confidence and a continuance of its use."

The use of the various "serums" and Nucleinic Acid have been recommended and used with some success but in a class of cases usually less rapid in their progress, and with results far less brilliant than that acheived in the treatment by antitoxin of acute diseases which run so rapid a course as do diphtheria and Tetanus. Ever since Koch's announcement of his discovery of the tubercle bacillus in 1881 and especially after his announcement in 1890 of tuberculin as an agent of decided bactericidal action, investigators have been trying not only to find a safe and effective way of destroying the bacillus but also of rendering the system immune as against any attack from this especial germ. Before we commend or condemn any one of the various preparations designed for this purpose, we must consider some of the conditions we have to contend with. There has been the same tendency with this disease as with all morbid states in which pathogenic germs were found, to ignore every element of the case except the existence of the germ, and attributing all morbid changes and resulting symptoms to its presence in the tissues. We must give due weight and prominence to the fact these germs cannot even exist, much less flourish and multiply, unless they find mucous membrane, glandular tissue or other organic structures in such a state as to furnish them with the proper environments for their growth and developement. This desirable nidus may be a condition inherited or it may be acquired. I recall a family in which all the children, five in number, developed tuberculosis at the age of twenty-two. It seems extremely probable that there was an inherited tendency, to the degeneration of the post nasal and pharangeal adenoid lymphatic tissues, so that there was a deterioration in quality or in quantity of the leucocytes which usually destroy the bacillus as they may be inhaled or swallowed. This failure thus to destroy, left them free to seek lodgment in the gland or on mucous surfaces, themselves in an abnormal condition, by reason of the imperfect circulation which had failed both to remove properly the effete matter, and to bring again blood bearing the proper nutritive elements, to repair and keep in a normal, healthy condition the glandular and mucous structures.

If it is true, as Tizzoni claims to have proven, in persons supposed to be in good health, and who have been killed by some accident, that there really existed some infection of their glandular system, then we must conclude that tuberculosis may exist, for a considerable period without recognition, being held in abeyance by the resistance of the physilogical action of the leucocytes of the organization, until such time as the parts affected by an acute catarrh, influenza or other depressing acute inflammatory attack, find themselves obliged to succomb to bacterial action. Taking then this cusory view of the pathology of these pre-existing conditions, of even the incipient stage of tuberculosis, it is evident that our therapeutical efforts must first be directed to restore the glandular and mucous surfaces, to a normal condition, as well as to the destruction of the bacillus.

We must recognize the fact that when we find the bacillus in the sputa, the disease has arrived at an advanced stage of tissue changes, which will requrre that the blood and nerve supply shall be of the best.

For these reasons all experimenters with serums or Nucleins start with the announcement that in order that these remedies shall be effective, they shall be employed in the very earliest stages. The object sought by the use of Nucleinic Acid as proclaimed by Vaughn, the serum of the blood of the Ass as practiced in Geneva, or the immunized blood serums of the horse as developed by Paquin, is to furnish reinforcement to the leucocytes of the system in their efforts to destroy the invading bacillus, but as already indicated these serum treatments must have as adjuncts the administration of blood restoratives, nerve tonics and tissue alteratives, and in cases where pus cavities are formed it may be desirable to also use the Anti-streptococcus serum.

The dose of the Nucleinic Acid is half to four c.cm. of one per cent. solution, repeated every second day, given subcutaneously, sometimes the five per cent. solution has been given by the mouth in teaspoonful doses, three times per day. Of the blood serum the initial dose should be not more than half a c.cm. subcutaneously, repeated daily and increased to three or four c.cm. Occasionally a patient from some idiosyncrasy will develop Urticaria, Erythemia or symptoms of Arthitis and the use of the serum will have to be suspended, or abandoned altogether. These injections must be given every day and for at least three months. Frequent microscopical examinations of the sputa should be made, to determine the presence or absence of the bacillus. In country practice, the every day treatment is often a great, if not an insurmountable obstacle in the proper care of the case, for the reason that the patient is so far from the physician that daily visits for a long period are impracticable. We have said nothing of Koch's "New Tuberculin," as its use has not yet been tested sufficiently to warrant its recommendation to the general practitioner.

The use of serum in the treatment of typhoid fever is still under advisement, experimentation not having established its value. A great advance has however been made in the diagnosis of this disease. In 1894 Pfeeffer announced that if the serum of an animal immuned against cholera was added to a fresh culture of cholera vibrio, a peculiar effect was produced. He applied a similar test to doubtful cultures of typhoid bacillus and found they could be distinguished from all other bacillus. But claimed this could only be determined by trying the experiment within some living animal, preferably the peritoneum of a guinea-pig. Gruber in 1895 made the same test in a test-tube. Others made the same discovery, but made no practical use of the fact. It remained for Widal, in June 1896, to show its practical application. If a drop or two of blood serum containing the Eberth bacillus be added to a culture of colon bacillus the clumping or agglutinating of the bacillus takes place. Further experimentation showed that a drop of serum from the blood of a typhoid patient, mixed with ten or fifteen drops of fresh bouillon culture of typhoid bacillus, the bacillus will clump together in a short time.

This subject was most thoroughly discussed in the Section on The Practice of Medicine at the last meeting of the American Medical Association. The President of the Section appointed a committee to present a summary of the discussion which they did as follows:

1. In selecting the material used in making the test the choice between; *a*. serum, *b*. dried blood, *c*. fluid blood, and *d*. blister fluid, will depend largely upon whether the object be scientific research, clinical diagnosis in hospital or private practice, or public laboratory diagnosis where the samples have been sent some distance.

2. In spite of considerable variation in technique, there has been a remarkable uniformity in the results obtained by those taking part in the discussion, and their average of about 95 per cent. of successes agrees with the general average of the cases, nearly four thousand, thus far recorded in medical literature.

3. Each of several methods of technique advocated may thus give good results in the hands of those thoroughly familiar with the details found necessary in each case and the sources of error to be avoided, success depending rather on being perfectly familiar with one method than on the particular one selected.

4. For routine diagnostic work even the very simplest methods may give good practical results, but for recording scientific observations those methods which are accurately quantitative should be selected. This is especially necessary in reporting exceptional cases at variance with the general results recorded or where the observations are made the basis of generalizations.

5. A complete reaction should comprise both characteristic clumping and total arrest of motion occurring within a definite time limit. For practical diagnostic work a dilution of 1 to 10, with a fifteen minute time limit, is convenient. In any doubtful case the dilution should be carried as far as 1 to 50, or perhaps 1 to 60, and a reaction not obtainable at that point should not be regarded as perfectly conclusive. For these higher dilutions the time limit should be extended to two hours.

6. Intensity of reaction in a given serum should be estimated by determining the degree to which it may be diluted without losing its power of giving a decided reaction, both as to agglutination and loss of motion.

7. The intensity of reaction shown by the same serum is influenced by the age, condition and virulence of the test culture and by the cmpoosition and reaction of the culture medium. For purposes of comparison the sensitiveness of the test culture should be taken in consideration.

8. The evidence so far recorded establishes that the reaction may be delayed or occasionally may not be obtained in cases

of genuine typhoid infection; and also that it may be exceptionally present in non-typhoid cases, though not in an intense degree.

9. In investigating exceptional and contradictory results the following circumstances have to be considered: *a*. The uncertainty of clinical diagnosis. *b*. The absence of bacteriologic or other confirmatory methods of diagnosis during life, giving decisive negative results. *c*. The possibility of overlooking typhoid infection even post mortem, in the absence of characteristic intestinal lesions where a very thorough bacteriologic examination has not been carried out.

10. The modifying influences mentioned above suffice to explain the divergencies existing in the reports of different observers. Without being absolutely infallible the typhoid reaction appears to afford as accurate diagnostic results as can be obtained by any of the bacteriologic methods at our disposal for the diagnosis of other diseases. It must certainly be regarded as the most constant and reliable sign of typhoid fever, if not an absolute test.

The great value of this diagnostic test will be at once appreciated. The distinction between typhoid fever and diseases presenting a typhoid state, as well as cases of slow fever, autumnal fever and febricular will be established. Then all questions of the correctness of the diagnosis, when different methods of treatment are suggested, will be settled and more exact conclusions drawn.

The State Board of Health has under advisement the question of in some way arranging with competent parties for the diagnosis of both diphtheria and typhoid fever, by examinations of faucial secretions or blood. Examinations to be made for any practitioner in the State that may desire it. Up to the present time they have not been able so to do.

The treatment of pneumonia by the use of the anti-pneumococcic serum, has been suggested. As early as 1891 experiments were conducted by several foreign bacteriologists, especially Klomperer and Foá, to prove that the blood serum of rabbits immunized to the pneumococcus possessed the property of protecting other rabbits against infection with this micro-organism. They followed these experiments by treating the disease in man by this immunized serum of the rabbit. Andeoud has used for this purpose the blood serum of persons convalescing from pneumonia. They did not in either case have any exactness regarding strength or quantity, hence their práctical work was of little value.

Dr. Washbourn, of London, reported in the early part of this year the results he had obtained in two cases, treated with blood serum of a pony, which he had rendered immune by injecting him with broth cultivations of the pneumococcus, and later with living cultures. These were continued weekly for five months, when by injecting the peritoneal cavity of a rabbit with the blood serum of the pony no ill effects followed, the pony was declared immune. With this serum he treated the only two cases I have been able to find reported. If this serum has been used in this country for the treatment of pneumonia, I have failed after considerable search to find any record of it.

His first case was a young man aged 29, rather a heavy drinker. He was taken ill with a sudden chill, with pain in chest. After six days he came under treatment. At this time his tongue was furred and tremulous, breathing rapid, cough with rusty expectoration. Pulse 108. Temperature 103.6 deg. Respiration 33. There was a trace of albumen in urine, chlorides diminished. On left side, auscultation and percussion showed pleuritic friction and impaired resonance over lower half of chest, with broncophony, tubular breathing, and fine crepetations. There was slight delirium. The following morning symptoms same, except there was complete dullness over lower left chest, in the afternoon the temperature was 104.2 deg. At this time, 2 o'clock, the first serum was injected. 20 c.cm. of this anti-pneumococcus serum of the strength of 660 units was used. At 4 o'clock the temperature had fallen to 101.6 deg., but at 6 P. M. it had risen to 103.4 deg; at midnight it had fallen to 100.2 deg. In the morning at 10 o'clock it had again risen to 103.2 deg. Pulse 116. Respiration 40. Physical signs unaltered. At 10 P. M. another injection of the serum, of the same strength and quantity was given. The next morning he was better. Pulse 88. Temperature 99.2 deg. Respiration 28. Cough almost gone and sputum not rusty; still dullness at the base of left lung, but tubular breathing replaced by ráles. From this time the patient rapidly convalesced. It will be observed that the temperature fell on both occasions after the use of the serum and on the day after the second injection, the crisis occurred. As this was on the ninth day of the disease it is difficult to say whether the result was due to this treatment or not.

The second case was of double pneumonia in a young man of 25, also a heavy drinker. Was seized with a severe chill the day before he came under observation. At this time his temperature was 101.4 deg.

Respiration 44. Pulse 140. Tongue furred, pain in right side, harsh vesicular murmur at base of right lung, but no other physical signs in lungs; first cardiac sound rather blurred, and impulse to be felt in line with nipple, and half an inch external. Urine shows trace of albumen. He was given acetate ammonia, and 1-4 gr. morphia at bed time. The next morning expectoration showed rusty sputum. On examination of right lung posteriorly from base to angle of scapula, there was dullness, tubular breathing, broncophony, ráles, pleuritic friction. On left side there was diminished resonance over about the same extent of lung, tubular breathing and broncophony. At four in the afternoon the dullness on right side had extended upwards two inches. At five o'clock 20 c.cm. of the same serum was injected. He passed a quiet night and the following morning seemed better, yet his temperature was 102-6 deg. Pulse 112. Respiration 60. At 11:30 the injection of the serum was repeated. During the remainder of the day the patient was restless and delirious, requiring two 1-6 gr. doses of morphine, and four ounces of brandy. In the evening his temperature was 104.5 deg. The next morning pulse 104, respiration 33, temperature 100.4 deg. On right side dullness decreased by two inches, tubular breathing faint; on left side the tubular breathing replaced by fine ráles. At quarter of eleven o'clock in the evening, another injection of same amount of serum was given and brandy omitted. He passed a quiet night and in the morning seemed much better. Pulse 92, respiration 36, temperature 99 deg. Right chest clearing, left chest completely cleared. From this time, being the fifth day, his recovery was rapid.

This patient was a bad subject for pneumonia, on account of his intemperate habits. The attack was severe, both lungs being affected. There was a good deal of delirium, the pulse 140, with signs of dilatation of heart on second day. On the day after the first injection the pulse-rate had fallen to 112. The disease in the left lower lobe never advanced after the treatment was begun. In both cases an urticarial rash was observed similar to the rashes occurring after injection with other serums and antitoxins. I have given the histories of these cases in detail, as they are practically the only cases treated by this method, at least of which we have any authentic report.

This brief resume, on some of the lines of medical progress in serum therapy, is not presented for the purpose of instructing you upon these different lines, upon each one of which long dissertatinns might with profit be written, but to impress upon you the fact, that we have already entered upon a decidedly new and advanced method of treating many diseases. To inspire you with an ambition to search the literature of the subject and to encourage each one of you to give personal investigation to this work, as opportunity presents itself.

When we consider how far-reaching this new therapeutics is likely to be, upon the future of our loved profession, we are inclined to exclaim with our honored, but departed colleague, Holmes:

"Oh, might our spirits for one hour return.
When the next century rounds its hundredth ring,
All the strange secrets it shall teach to learn,
To hear the larger truths its years shall bring,
Its wiser sages talk, its sweeter minstrels sing!"

Higher Medical Education.*

By Wm. T. Slayton, M. D., (Harv.)

It is with no little diffidence that I open up a subject which, no doubt, has been interesting to you all since the beginning of your professional education, but more especially during the past decade, marking as it does an epoch in the history of higher medical education and progress which would have been possible only in a country like ours, and which if continued at the present rate for a similar period to come will place us in a very desirable position.

But while congratulating ourselves on what has been accomplished, let us "put not our hands to the plow and look backward," but push on with all our might a cause which means the advancement of the healing art and a constantly improving quality of graduates, who, in all probability, will, soon after receiving their much coveted diploma, take the life of some human being into their hands. And let us ask ourselves if these improvements have not been worth all they cost in time and effort. Meanwhile let us ask ourselves what part of this work has been performed by the old Green Mountain State, a State of which we, as her native sons, are proud to think is at least abreast of others in most things, but ashamed to say is sadly behind in this, one of the most important questions of the day. It is true that efforts have been made to place her in her proper position among her sister States, but it is no less true that those same efforts have come to naught, possibly through the efforts of irregulars and charlatans, but

*Read at the Eighty-fourth Annual Meeting of the Vermont State Medical Society. October, 1897.

more probably through lack of effort on the part of regular practitioners. There are those who have suggested that the time is not propitious, and that we should wait for a favorable legislature to secure our ends, legislation being our only means. But as well may an ocean liner wait for a favorable moon in which to put to sea as for us to wait for a favorable legislature to give us that which we are justly entitled to, and which it would gladly accord if it were fully conversant with and realized the importance of the subject. If the legislature is not favorable let us educate the members to make them favorable. Can we not convince them that Vermont is the only Eastern State which will accept any kind of a medical diploma, and is, with one exception, the only one in which a State examination is not required; consequently, is a dumping-ground for the rejected candidates of the surrounding States and the Dominion of Canada. And can we not convince them that there are stock company "medical colleges"—so-called—by the score, which are conducted by men interested only in their pocket-books and the name professor, whose only aim is to afford students an opportunity to secure their degree in the quickest time possible, regardless of their actual knowledge of the science of medicine, the only requirements for admission, for all practical purposes, being that the student shall know the multiplication table and prove his ability to name a half dozen ex-presidents. If not, then let us acknowledge our impotence and humbly bow our heads, convinced that we are the inferiors of men in other walks of life, and that the Vermont Legislature has no respect for the profession of medicine.

But, while we are waiting for all this to come about, let us reflect on what has been done elsewhere. During the past year the profession of Arizona have succeeded in obtaining a territorial board of medical examiners, the board to examine all candidates for license to practice who are graduates of reputable medical schools. Idaho has passed a similar, though better law—better because the board has the authority to revoke certificates, after hearing, for unprofessional, dishonorable, or immoral conduct. New Hampshire is in line with a law creating three State Boards of Examiners, and requiring that all candidates for examination shall have had a preliminary education equivalent to a full first-grade high school course, and that they have studied medicine four years, including four annual courses of at least six months each. Iowa has taken a step in advance by securing an amendment to her law, requiring an examination of all candidates applying for registration after January 1, 1899. Indiana and Wisconsin have succeeded in establishing State Boards, although, as yet, they will accept a diploma from a recognized college. All these help to complete a year of great progress.

We have in this country at the present time twenty-nine States and the District of Columbia requiring an examination, and fifteen other States, although not requiring an examination, have such stringent rules governing the recognition of colleges that they are nearly equal to one. Even the Cherokee nation, in the Indian Territory, requires an examination of all applicants to practice before a board of examiners appointed by the principal chief.

One hundred and seventeen of the one hundred and fifty-five medical schools of the United States require attendance on four annual courses of lectures, of which number twenty-seven require attendance on sessions of eight months, and ten of nine months each year. Our own State University has just lengthened its course to four years, and may she go still further by requiring attendance on nine months each year instead of six, as several other universities, located in smaller towns than Burlington, have done—one in particular being the University of Michigan, which has required four annual courses of lectures of nine months each since 1891—and perhaps after that she may see fit to adopt a higher standard for admission than is now required, especially as States on either side of us, as well as several others, have recently passed laws which will help those schools that try to raise their standard, by accepting nothing less than a high school diploma of the first grade.

In connection with the four years' course, it is interesting to note that there are but three schools in the Northern States, excepting Missouri, and including Kentucky and Maryland, which require attendance on less than four annual sessions. Those three are the Medical Department of Bowdoin College, Brunswick, Me.; Milwaukee Medical College, Milwaukee, Wis., and the Baltimore University School of Medicine, Baltimore, Md. This cannot be said of the Southern schools, as the majority of them still adhere to the three year plan. Just what they expect to gain by this it is difficult to understand, as their reputation will certainly suffer in the end, especially as there are eleven States in which their diplomas will not be recognized, as will be noticed by a glance at the map* which has

*From "Medical Education and Registration, United States and Canada, 1897," by Wm. T. Slayton.

been distributed to you. The legislatures of a part of these States have prescribed the four-years standard, and the State Boards of the remainder have helped the cause along by announcing that a diploma from a college which requires less than a four years course would not be recognized by them. Some of the boards are passing very stringent resolutions in regard to the clinical advantages which schools shall have to entitle them to recognition.

Dr. Potter, of the New York State Board, says that it has been asserted in certain quarters that State Boards are antagonistic to colleges, that they are setting up standards of their own and that their rules are oppressive to the schools. He adds that nothing in his view could be further from the truth, and that the real facts are that the boards and the colleges are working along parallel lines to accomplish the same ends, viz., an improvement in the quality of physicians admitted to practice in the United States. Moreover, there is harmony of action between them that is remarkable, considering the radical changes that have necessarily been wrought in methods of teaching as a result of the practice laws.

If the schools in many instances have waited for mandatory laws to raise their standards and increase their years of study, they must not complain that the rank and file of a great profession has arisen in its might and through its constituted State medical societies demanded laws of the several State legislatures that shall advance the cause of higher medical education. The examining boards are merely the servants of the people in this matter—are simply instruments through which their will obtains definite expression.

In view of all these changes, what is to become of the graduates whose schools are not recognized in most States? Will they not follow one of the natural laws and find the weakest spot, viz., a State in which there are practically no requirements? If so, do the people of that State want men whose diplomas are not recognized or who have been rejected in other States, and will the medical profession, as a whole, stand as high in such a State? There can be but one answer to this and that is, most emphatically, No!

Now that we have diagnosed the difficulty let us see if we can find a remedy. The answer can be nothing short of, Yes, if every man will do his duty; and has not Vermont and its State Medical Society as much right to expect every man to do his duty as had England or Nelson at Trafalgar. That duty can be at least partially performed by seeing that every member of the State legislature has correct information on the subject and convincing him that no particular class of practitioners shall be discriminated against, but that the requirements will be the same for all, excepting in the matter of therapeutics, and if the applicant is not willing to submit to a fair and impartial test by examination, that he is not a fit person to take the lives and happiness of his fellow citizens into his hands. The question next arises as to who shall examine the applicants. By all means let it be one joint board instead of a separate board for each school, thereby insuring equality of standard. This opinion is strongly supported by the majority of practitioners in other States as is attested by the fact that in 29 States where examinations are required seventeen have but one board, and out of the forty-five States having State boards only sixteen have more than one. If the governor is to have the appointing power, he should be required to restrict his appointments to a list of candidates placed in nomination by the three State Medical Societies. Perhaps it would be as well to require also that not more than two-thirds of the board should be members of any one political party. It should be the duty of the board to examine all candidates for a license who are graduates of medical school recognized by them. In this way they would be able to raise the standard by passing resolutions which would increase the requirements of medical schools as to admission, periods of study, facilities, etc., as is done in many other states, and last but not least, they should be required to revoke certificates after hearing for unprofessional, dishonorable or immoral conduct. In connection with this the writer has been informed that in States where this provision has been enforced there is not one traveling advertiser or man who advertises in any form, but whether we are to have one, two or three boards, let us have something and that at once.

How to Elevate the Profession in the Country.

By T. S. Hughes, M. D., Cohutta, Ga.

The wording of my subject suggests or implies that the profession is down in the country, and so it is to the serious detriment of the doctors, but more especially of the people. I can only speak positively of North Georgia and East Tennessee, and more particularly of several of the counties of each State, but we suppose it is about

the same all over the South. We will only have to state the fees that it is customary to charge here that you may know that the profession is down here. Five dollars is the fee here for obstetrics, and other things are in about the same proportion.

Some one may be ready to say work up, read up, and get all the practice. That wont do. Take a case for instance. There is a lady over the way here that is taken in confinement (it is a bad case that any of us might conceive of). Some one may have said the profession is over crowded is what is the trouble. Well, lets see. We strike out one half the doctors; they are scarce now. This lady is taken sick, we send for Dr. A.; he happens to be at the farther edge of his territory and has a case he can't leave. We go for Dr. B., and have some trouble in finding him, and when he does come the critical moment for skilled assistance to save the case has past (*she dies*). Would the case have been any better off if there had been a dock at every cross-roads and not have had the proper instruments or appliances to have managed the case, even had he had the proper theoretical knowledge of the case.

You may give a man an unlimited territory to practice in, at our rate of fees, and after he has practiced forty years he will be just forty years behind in the profession. The best doctor that ever practiced here, after fifteen or twenty years hard work, went to New York and took a course, and afterwards remarked to me that a man did not know how far he was behind till he had gone there. So we see that our best physicians here amount to about an *umbilicus indicus*. I am not certain what that means, but in this case we mean that he is a one-eyed man among the blind; the most of us about amount to the blind leading the blind. I will venture to say there are physicians practicing here that can't give the correct physiological effect of a single drug they use.

What would you think of a dock that would undertake to perform craniotomy with his pocket-knife or a pair of rusty scissors, and, by and by, nature delivers the woman, and the baby lives a week and dies. Do you think he benefits the patient or adds a star to his crown beyond the grave.

Now, the question is, how are we to remedy this sad state of affairs? Must we argue with the people to stop paying out so much to build churches and to pay preachers to talk about the worm that never dies and the fire that is never quenched, and what mode of baptism a man ought to be baptized with in order to be saved in the next world, in order that they might have more to pay their doctors?

No, this would not do, they would cut off our bread right strait; they would have no charity for us at all if we were to talk that way. In fact, if we did not know better, we might think it would work better the other way, that is, do like some doctors do—be very religious and pray a great deal for our patients.

Now right here I want to give you my opinion of this prescription. This prescription of prayer is made up of only two ingredients; the base is ignorance, and hypocrisy is put in as an arromatic or corrective to make it palative to the ever credulous public. But we find there are a great many people who don't care for the prescription.

I don't see how a physician can wait on a case of Obstetrics aseptically and antiseptically, and keep his eyes on the case till all danger of septicemia is past for $5.00. the case being any where from two to eight miles from his office.

We claim that you can no more elevate the profession without raising the fees than you can civilize the world without scientific education and good breeding. If we would talk this question up among ourselves, and in the associations, and through the journals, and could get the Legislature to help us a little, we might better the state of affairs at last. I believe that if the Legislature would pass a law making it a penitentiary offence for a physician to wait on a case of obstetrics for less than ten dollars, in the country, they would do more to benefit humanity, and to evolute the world toward what God intends it shall be, than was ever done before at a single stroke.

Common Sore Throat.*

By James H. Atlee. M. D., Chattanooga, Tennessee.

Ignoring the synonymous terms—follicular amygdalitis, acute pharyngitis, and angina simplex—I desire to call attention to the "common sore throat," which is almost universally present, and with which all are more or less familiar. Although treating of sore throat from a practical standpoint, and not as a specialist, I hope that something may be said which will make this paper of greater import than the subject at first suggests.

A simple sore throat in itself, is thought to be a trifling affection, undeserving the attention of a physician; but when we re-

*Read before the Tri-State Medical Association, Oct. 13th, 1897, in Nashville, Tenn

member that the throat is involved in many of the maladies of childhood, and among these the contagious and infective diseases, and that the sequelæ are often most serious, we are more and more impressed with the fact that a sore throat must not be ignored. The frequency with which a sore throat is the initial symptom of many of the diseases which are so fatal to children, suggests the importance of early recognizing in the throat the first digression from a healthy appearance. Parents and physicians alike are inclined to overlook a beginning sore throat, and to neglect its care until some graver malady has developed.

The examination of the throats of complaining children, at the very beginning of the attack, is essential, not only that the symptoms of the onset of the disease may be learned, but that the patient may be placed under the most favorable conditions for his own safety, and that the well members of the household, as far as possible, may be protected from a possible contagion. It is a good custom to cultivate, that of examining the throats of children whenever sick, whether or not complaint has been made of these parts. Especially is this precaution of value during epidemics of infectious diseases, for upon the first appearance of any inflammatory process, the child can be kept at home, and isolated until the disease assumes some more definite form. It is in this way that the spread of infectious diseases, attended with sore throat can be controlled. The throat in these affections very often does not assume its characteristic appearance, so that a diagnosis can be made at first sight, until it is far too late for the welfare of the individual, or for the protection of others. It is only after opportunity has been given for the spread of the contagion to various and remote foci that the precautionary measures are taken.

Acute sore throat, although occurring at all ages, is more particularly a disease of childhood, and although recognizing no boundary as to climate or period, it is more prevalent during cold and damp seasons, and when sudden changes of temperature are taking place. As a predisposing cause there may exist some cachexia, scrofula, syphilis, rheumatism, etc., or the cause may be sought for in the surroundings, continued exposure to foul air, defective drainage, the drinking of impure water, and living in badly ventilated houses. Some children seem to possess a predisposition to attacks of sore throat without any existing cachexia, and the susceptibility to the disease seems to increase with each recurring attack.

The exciting causes are usually undue exposure to cold and damp, the inhaling of pungent vapors, the drinking of hot and irritating liquids, and exposure to infectious diseases with throat manifestations. Perhaps there is no one cause which tends to keep up an inflammatory condition of the throat more than an irritation of the middle and posterior nares. The two are often asciated and the inflammatory condition of the throat will remain until the nasal trouble is corrected.

Sore throat often occurs in epidemics, and as such is an infectious disease, spreading through families, schools and communities.

A sore throat manifests itself by pain and itching; with a feeling of fulness in the throat, and a continued tendency to cough and expectorate. There is some febrile disturbance, an accelerated pulse, coryza, a fetid breath and a coated tongue. There exists marked pain upon swallowing, hoarseness, embarrassed articulation and impaired hearing.

Upon inspection the fauces are of a bright red color, the uvula is swollen and elongated, and by falling on the tongue creates a persistent desire to swallow. The inflammatory condition proceeding the mucous membrane becomes swollen, and the tonsils inflamed and enlarged, and covered with a muddy white membrane, which is perhaps a discharge from the nares, or else a secretion which oozes from the openings of the follicles on the surface of the swollen tonsils. This last exudate, unlike that of diphtheria, appears in small yellow or white dots, which do not coalesce, are strictly confined to the surface of the tonsil, and when cast off leave an ulcerated surface.

In diphtheria, the initial symptoms are so nearly related to those of the common forms of acute sore throat that a diagnosis in the beginning is difficult. There is a dark redness and swelling of the arches of the palate and tonsils, with marked œdema of the uvula, and until the characteristic membrane appears, and the constitutional symptoms manifest themselves, the disease is quite undistinguishable from acute sore throat.

Likewise the sore throat in scarlet fever in its initial stage, appearing early, consists of a diffuse redness extending over the tonsils, palate and half arches, and in a swelling of the uvula and surrounding glands. The subjective symptoms are similar, and until the rash appears on the second day a diagnosis is uncertain.

That diphtheria and scarlet fever can be more readily communicated from the sick to the well, by persons suffering with sore throat, has long been acknowledged. The instances are numerous where children have

contracted diphtheria from adults suffering with sore throat.

All these facts indicate how essential it is to care for even the ordinary attacks of sore throat, and as a precaution to isolate all cases until the outcome of the disease is known.

The treatment of acute sore throat is simple. Isolation, so far as possible, from the uninfected children of the household, confinement in a room of equable temperature, hot foot baths, and the administration of mercurial or saline cathartics. Every household should possess a good atomizer, with explicit instructions as to its use. As an antiseptic solution, to be used in the atomizer, one of carbolic acid and glycerine is preferred. Or a spray of Monsel's solution of iron, well diluted, is productive of good results. The spray, whatever it is, must be thrown well upon the tonsils and half arches, and back of the velum palati.

Attention must be given to the nose, which is almost always affected. The nostrils should be well atomized with the antiseptic solutions, and afterwards anointed with vaseline, or some agreeable ointment. This treatment observed every night at bed-time will soon be prolific of good results. In applying the ointment to the nostrils, a convenient method is by means of an ordinary soft rubber catheter, which after being thoroughly anointed is thrust through the nostrils into the posterior nares.

Attention to these parts, treating the symptoms as they appear, with isolation of the patients, are the chief points in the treatment.

Malarial Hæmaturia Black Jaundice, Hæmoglobinurea, and many Other Aliases.

By Dr. J. H. Sears, Waco, Texas.

It is not now my intention to write about paroxysmal hæmaturia which, may have fifteen or twenty causes, nor of malarial hæmaturia without jaundice or vomiting. The conditiou of which I propose to treat, is characterized or introduced by a decided chill, more or less prolonged, followed by rise of temperature more or less intense, with pulse slightly increased in frequency, fulness and tension. Breathing somewhat hurried or sighing, great prostration, restlessness, and jactitation, intense thirst, frequent vomiting of black, green or bluish billious matter; aching head, back and limbs; intense general jaundice, bright-yellow or blackish, with free micturitions of large quantity of black or bloody urine. These are the principle objective symptoms. Now let us draw aside the veil and take a peep at the inner court of the temple or tabernacle. Here we find the blood—the life so far as the red blood corpuscles are concerned, broken down—necræmic and the hæmaglobin spilled out into the blood current diffused through the cellular structures of the body, producing intense hæmatoginous jaundice. Probably as much as fifty per cent. of the red corpuscles are destroyed. We find the liver and spleen enlarged, congested with broken down dead corpuscle, the remains of molten red-corpuscles of former attacks of paroxysms of chills. The gall bladder distended and full of black tarry tenacious bile. The lumen of the bowels congested, and filled with a black meconium looking substance.

The kidney congested and the beautiful malpighean filters obstructed with coagula or dead blood corpuscles trying to escape from the circulation, the tubuli uniriferi partly pluged with coagula forming cast which are frequently seen under the microscope, in the urine. These are some of the principle subjective symptoms or pathological conditions.

Here we have a picture, which to a sensible sympathetic physician is truly appalling. He stands abashed as he would before a beautiful young bride, in eclamptic convulsions in her first effort at maturnity. Either of which may die of uremic poisoning or in convulsion.

There would be no hope of recovery from such a grave condition, were it not for the white blood corpuscles, our faithful sentinels, distributors of nutrition, they pick up from the wreck whatever may be of service to the needy tissues and distribute it as best they can or may. This fearful condition is brought about or induced, generally, by frequent recurring attacks, for several months of some one of the intermittent types of malarial fever, which has received tempor ary treatment at the time of the paroxysm, with a cathartic and a few doses of quinine, never using hæmatinic tonics to restore the lost blood corpuscles or hæmaglobin or proper hygiene or regimen, after up from chill. There are quite a large per cent. of red blood corpuscles destroyed at each recurring paroxysm and I have no doubt that these molten dark corpuscles are deposited in the liver, spleen and other tissues of the body (as best means of retiring them from the circulation). I think when a certain per cent. of the red blood corpuscles are invaded by the hæmatozoon of Laveran or more likely the spleen has become enlarged or crippled in its proper functions, by the

frequent or constant deposit of pigmented bodies or molten black corpuscles, it turns loose a large mass of half finished sick blood corpuscles, in the blood current, until the victim is seized with a chill in which all the above named frightful symptoms are developed. What are the indications to be met, with the above objective symptoms and the pathology as indicated by the subjective? It will be seen at a glance, if we follow the indications pointed out by nature. There will be a large amount of elimination to be effected by the skin, bowels and kidneys, but chiefly through the kidneys. If they should fail us by a rupture of the malpighian corpuscles and the tubuli uniferi becomes blocked with coagula in a large majority of their tubes, the issue of the case is determined against us. The strong fort of the enemy, is the kidneys. So that our principle attack should be made at this vital point, with any or all the best known diuretics to maintain the excretory functions of the kidneys. Failing in this, whatever else we may have done, availeth nothing, our patient dies of uremic poisoning and often convulsion.

There are other important points. Such as quieting the stomach, disgorging the liver and spleen, freeing the bowels, stimulating the skin, watching the circulation and respiration. If your therapeutic generalship is equal to the emergency in all these varied and important points, your patient is safe. Enter your armamentarium, select your keenest, brightest well tried blades. Wage the battle to win success or lead a forlorn hope. Thus armed stand like men facing a grave and trying condition, using the very best forces belonging to our art, to meet the indications presented, in the most speedy and complete manner. Then to begin, we will test some of the ugly bloody urine, passed by the victim, by adding alcohol or spirits of niter to an ounce in a test tube there will be thrown down a heavy precipitate, and leave a clear or red supernatant fluid. If clear or urine color the prognosis is favorable. If red with hæmaglobin or hæmatin the prognosis is very grave. The gravity of the case having been determined by the above simple test, we direct a mustard foot bath. If the surface is hot and dry, sponge off the entire body with alcohol or vinegar, and water. If the surface is cool cover well with blankets and apply heat to extremities. Keep the patient covered closely with blankets —as for yellow fever—during entire attack. Quiet the stomach with effervesing salines which will at the same time clear the bowels, disgorge the liver and spleen. Give diuretics to keep the kidneys active. ℞. Tr. iodine, carbolic acid, digitalis, belladonna, 1 gtt. Give every one, two, or three hours as necessary to control vomiting, keep kidneys active, sustain the heart. Keep surface sufficiently flushed, the skin warm. Can use other diuretics if necessary. Cream tarter spt. nitre nitrate and citrate potass. &c. Give hypodermatics of strychnine, caffein or strophanthus if needed, to sustain circulation. Hyocin. hydr. or Codin. phos. to quiet restlessness as necessary. Wash out the bowels with cool water and glycerin if much fever. If surface is cool use hot water, gal. or more. If the kidneys cease acting and the blood or arterial tension gives way use artificial serum in the veins or hypodermoclysis freely, apply hot digitalis poultice to the back over region of kidneys.

Don't forget nourishment for it is the most important part of the treatment. Give teaspoonful doses of beef juice, in old port wine, every hour if stomach will tolerate it. Give predigested milk per rectum every four to six hours. If you cannot get fresh beef to make the juice, use egg albumen in lemonade or egg-nog made of the whites and fresh cream. Anything that will make blood and sustain the system till the storm is passed.

The first case of black jaundice I ever saw was in consultation with Dr. McDonald from N. C., in Nov. 1855. This was one of those grave case in which so many red blood cells were broken down, or in a necremic condition, and such a large amount of hæmaglobin and bile was diffused through the cellular structures as to truly cause a black jaundice. When a blister was drawn over the stomach (to quiet it) it filled with dark wine colored serum. This patient, fifty-one years of age, died on the 14th of November, 1855. From this date up to several years after the war, I saw quite a number of cases. Our first cases were treated by the free exhibition of quinine, calomel, diuretics, diaphoretics, stimulants, egg-nog made with whites of eggs, milk, milk-pounch, &c. But we soon learned from sad experience that malarial hæmaturia was a disease of one paroxysm, that it was much more apt to pass into the remittent or continued type, than continued intermittent. We found out also that large doses of quinine given when the kidneys were obstructed or not acting at all, was a very hazardous procedure, and that it was far safer to risk the returning of the chill, than use quinine. I have never thought that the number of whole or sound red-blood corpuscles lost in the hæmorrhage, were sufficient to justify the use of astringents.

I would be pleased to say something of the action of bile acid on the blood, of the bloody serum from blisters, of urinalysis, of microscopic appearance, of hæmaglobin anæmia and general anæmia, of use of analeptics, and of change of residence to one non-malarious. But I suppose every intelligent physician has an opinion of his own on all these points.

Acetanilid in Malaria.

By P. C. Hutton, M. D., Goldsboro, N. C., County Physician and Superintendent of Health, Wayne County.

It was with much interest that I read in the current issue of your Journal, an attack made upon acetanilid and its use in malaria. The author, Dr. Dabney, referred to Dr. Brodnax, an advocate of acetanilid, and criticised his acetanilid treatment with some severity.

I, myself, cannot say how this drug acts on malaria in a Louisiana swamp, and judging from recent articles by Dr. Brodnax and Dr. Dabney, there seems to be some diversity of opinion, but I can say that the remedy is a most valuable one to one who is practicing medicine in the swamps of North Carolina. Unlike Dr. Brodnax, I do not claim that it has never failed in my hands, and differing widely from Dr. Dabney, I am not afraid to employ it in any ordinary case of malaria. True, in patients debilitated from long illness, or with weak cardiac action, I have seen symptoms which were unpleasant follow its use, and again, I have seen one case and heard of others, where there was an idiosyncrasy for the drug, but as for a case of death following its administration, I have it yet to see.

I can conceive how acetanilid would be fatal under some circumstances, but as a rule these conditions are so apparent that no man of medical attainments would employ its use under such circumstances. Would the reader administer acetanilid in any organic heart trouble? Would he suggest its use in any asthenic condition or any disease where the action of the heart was feeble or imperfect? Or would he give it knowing that the individual presented an idiosyncrasy for the remedy? I think I can say that few of us would prescribe it under the above conditions. But, knowing none of these contra-indications to exist are we not at liberty to judiciously employ it? We sometimes find patients whom it does not act well upon, but can Dr. Dabney relate an instance in which it resulted fatally where none of these contra-indications existed? Let me mention a case of recovery after the ingestion of a large amount of this coal tar product.

Chas. Wilson, a young white man, age 21 was admitted to the Emergency hospital, this city, Sept. 3, '97, with a diagnosis of remittent fever. He remained ten days and was convalescing, when I ordered a dose of salts for him. By mistake he took two teaspoonfuls of acetanilid instead. A heaping teaspoonful being 90 grains, I should say that he took between 170 or 180 grains at this one dose. This was 10 A. M. At 2:30 P. M. I was called, and going to the hospital found him in a semi-stupefied condition, his face and extremities cyanotic, his lips extremely so, the action of the heart feeble and irregular, and respirations 12 to the minute.

Immediately I gave him a hypodermic of 1-30 gr. of strychnia in one leg and 1-100 of nitroglycerine in the other. The effect of this was apparent in a short while, and in 30 minutes I gave him 1-100 gr. of atropine, and followed this in 30 minutes by more strychnia and calomel, and a big dose of castor oil. For the following six hours he took 1 grain of calomel hourly, and a dose of oil every 2 hours. The cyanosis rapidly disappeared under the strychnia and nitroglycerine, and the next morning he sat up, but was somewhat weak. His bowels moved at daybreak for the first time, but had a disgusting odor during the entire day. The following day he complained of a dizziness in his head and compared his feeling immediately after taking the drug to a feeling of drunkenness. Aside from this he made no complaint whatever. The following day he was carefully watched, but presented not a symptom, and the next day was discharged.

Now here is a case in a man, weakened from a ten day's attack of remittent fever, taking 175 grains of this acetanilid, and without treatment for four and a half hours, ending in a complete recovery. Two weeks after his discharge from the hospital, I met this patient on the train, and he claimed to be perfectly well aside from constipation, from which he had been suffering for some time.

Now does it seem probable that a 5 grain dose will harm an ordinary individual?

In conclusion, I will say that I have used it in the various types of fever except typhoid and its employment has been quite satisfactory. I do not assert that it has not failed, but, on the contrary, say that it has in some instances, but I feel justified in recommending it in ordinary cases of malaria, and am reasonably sure that when judiciously used, and the person having no idiosyncrasy, no bad results will follow its administration.

But Dr. Dabney says that 90 per cent. of the fever cases are not due to the plasmodium malariæ. He is from Louisiana I believe. If, by chance, the doctor should come to Eastern North Carolina, he will soon find it necessary to alter his statistics.

Diagnosis and Management of Breech Presentations.

By W. C. Brownson, M. D., Asheville, N. C.

That I should say anything in regard to the diagnosis of these presentations may occasion a feeling of mild surprise with some of you.

Any one should be able to tell a Breech you will say. No one would ever mistake it for a vertex at any rate, though there is a possibility that there might be a little hesitation in differentiating from the face. This is not altogether true. I have reason to believe that the position is by no means always recognized. I have known a good man of large experience who, after external palpation, assisted by a vaginal examination, announced the position with pleasing confidence as "a Left Occipito Anterior," but in the progress of labor, on the rupture of the membranes, there was an unexpected prolapse of the cord, and shortly a breech made its appearance.

I am but half ashamed to say that I mistook my first breech case for the occiput, and only discovered my error when labor was far advanced. I may say though that at this time I was very young, and likewise very much "rattled."

With a careful and thorough examination no mistake need be made. Usually by palpation of the abdomen the hard globular head can be made out in the upper part of the uterus, though not always with certainty. A vaginal examination in an early stage of labor will discover the presenting part to be higher than in the usual vertex case, while the breech gives the impression of a softer, more yielding body than the hard, bony head. After descent begins and especially after rupture of the membranes, you can distinguish the tip of the coccyx, the cleft between the buttocks, frequently the anus—which in the absence of the alveolar ridges would hardly be mistaken for the mouth—and the organs of generation, then usually the discharge of more or less meconium tends to establish the diagnosis.

One may attend a number of labor cases before meeting with a presenting breech. Again, there may be quite a run of them. Thus last year, of six consecutive labor cases in my practice, in five the breech came first.

MANAGEMENT.

As a rule, but little is to be done until the birth of the pelvis. I have never chanced to see a case of impaction in which the breech failed to advance after entering the pelvic canal. In such cases it is advised either to bring down a foot, to hook a finger into the groin and exert traction, or, when it cannot be reached in this way, to try and pass a catheter or loop of flexible wire around the hip and by its aid to draw a string of yarn, or something of the kind, around the part and assist delivery. Some authors advise that in these cases the forceps should be applied, but this instrument being specially constructed for grasping the head should only be used with great caution, if at all. After the breech is expelled and the lower extremities slip out, you begin to feel that you should do something, and if there is a pause in the advance of the body, the impulse is strong to seize the legs and pull. This impulse should always be resisted, for by traction, while the body might come down, the arms would remain up above the head, thus seriously complicating matters—the breech should simply be supported by the hand.

After the body is expelled as far as the umbilicus, the critical time begins. A loop of the cord should be pulled down to avoid pressure upon it; if it is pulsating freely all is well. The arms usually soon drop out. If they are extended above the head, which rarely happens when there has been no interference, they should be carefully brought down by hooking a finger in the bend of the elbow and sweeping them over the face and chest; the posterior shoulders being sought first.

At this stage some assistance is almost invariably required. In a multipara, with a large roomy pelvis, by the voluntary straining efforts of the mother, the head may be expelled at once, but it is usually necessary to urge the woman to bear down with all the strength in her power. Then by one or two hands of the physician, or of an assistant, vigorous pressure should be made from behind. If there is failure in rotation, the posterior shoulder should be firmly crowded back into the hollow of the sacrum, then the index finger should be passed up along the side of the woman's pelvis—the head being in the transverse position—and hooked into the child's mouth and moderate traction exerted on the lower jaw, while at the same time, with two fingers of the other hand, flexion may be assisted by pushing up the occiput. Carrying the child well up between the woman's thighs, and strong

pressure being exerted from above by an assistant, there is rarely any difficulty in delivering the head promptly. I am aware that most authorities advise, instead of a finger in the mouth, that the index and middle finger should be passed over the face at each side of the nose to depress the superior maxilla. The mouth however is more easily and quickly reached; there can be no slipping of your hold, and the symphysis will stand quite a pull. I have never known it to be damaged except in the case of an immature child.

It is quite generally recommended to use the forceps for the extraction of the after coming head, but I am of the opinion that it is very rarely called for unless in the case of a disproportionately large head. I would not go so far as to say with Penrose that the use of the forceps in these cases "is a rough and unintelligent application of unnecessary and badly applied force," but that usually the head can be as easily and expeditiously delivered by proper manipulation as by the use of the forceps.

The Medical Signers of the Declaration of Independence.

In a paper read before the American Academy of Medicine, Philadelphia, May 31, 1897, by Albert L. Gihon, A. M., M. D., Medical Director U. S. N. (retired), entitled: "The Great Physician of the Revolution," we were surprised beyond measure, says the Georgia Journal of Medicine and Surgery, to find an error of more than ordinary gravity, which we desire to see corrected, and which we are certain none will be more readily to do than Dr. Gihon himself. After speaking of the niggardly manner in which the medical profession, to its shame be it said, has contributed towards the fund for a monument to Benjamin Rush, we find the following: "This illustrious signer of the Declaration of Independence, and the *only practitioner of medicine* whose name is affixed to that instrument——."

We desire to call attention to this statement, not because we wish in any way to detract from the noble share which Benjamin Rush took in signing that immortal document, but because through ignorance or carelessness of an unpardonable kind, the medical profession is not receiving its just deserts. Is there not a member of the American Academy of Medicine who knows that, besides Rush, *four* other physicians signed that same document. Lyman Hall, of Georgia; Oliver Walcott, of Connecticut; Josiah Bartlett and Mathew Thornton, of New Hampshire.

It is strange indeed that the best educated medical men of the North should have allowed Dr. Gihon's statement to pass unchallenged. The American Academy of Medicine is a body claiming an educational superiority—it requires for membership (or rather, the high-sounding "fellowship") a literary degree of A. B., or its equivalent. Its function is to "elevate the profession," and it does seem to us ridiculous that these superiorly educated beings, assembled together in the City of Brotherly Love, should exhibit so monumental an ignorance concerning the fathers of the Republic in which they live. Even the editor of the Bulletin, issued by the Academy, let the assertion stand without comment!

In the same number of the Bulletin which contained Dr. Gihon's paper, we find in the editorials the following modest description: "The Academy is, in reality, a special medical society, investigating, in a philosophic manner, the many problems pertaining to the physician and his surroundings. It is endeavoring to elevate the profession of medicine, not in a hackneyed and offensive sense, but by the application of the Baconian method of investigation to the many problems of vital interest to the practice of medicine, to formulate accurate statements of the real condition, and suggest logical methods for securing the best available condition."

Oh, learned and modest fellows! would it not be wise to show your less educated brethren that you know something of the past before you would lead us in the future? Had you not better apply your "logical methods" and "accurate statements" to the most salient features of our history and prove to us the value of the titles so ostentatiously worn?

Menorrhalgia and Its Rational Treatment.

Dr. Massey, in the Am. Gyn. and Ob. Journal, states that menorrhalgia is merely the expression of an attempted functionation of a lame set of organs, the pain often taking the form of a menorrh-spasm, the causes of which may be in the nervous system exclusively—the neuropathic diathesis—though it is usual to find some chronic inflammatory condition of the uterus or ovaries as the exciting agency.

The rational treatment calls for a correction, not only of the faulty condition of the nervous system, but also of the condition of endometritis which is found to exist in nine-tenths of the cases. For the latter, electricity, the negative pole within the uterus, is advocated, the currents varying from fifteen to forty milliamperes, the applications being made twice a week for over two months.

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THE

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EXPERT TESTIMONY.

The need of radical reforms in the methods of obtaining and using expert testimony was never more obviously apparent than shown in the recent sensational trial of Luetgert, the Chicago sausage maker, for the supposed murder of his wife. To indicate the nature of the needed reforms it is only necessary to review in brief the existing methods. At present, in matters wherein expert testimony is deemed relevant, the opposing interests are both at liberty to summon witnesses as experts; and neither the judge nor the jury have any assurances worthy of name, in the great number of instances, that the persons so introduced are entitled to credence in their alleged scientific capacities. The expert is placed upon the witness stand and after giving his opinion is subjected to a cross-examination, in order that the jury may know whether he understands his profession; in other words whether he is really an expert, and, if so, whether he is more of an expert than others that may appear in the case. Could any thing be more sublimely ludicrous than this method of determining the scientific competency of an alleged scientist! To submit the esthetic merits of a landscape to the judgement of the blind would he about equally as rational. The perpetuation of the present methods of cross-examination, testimony in rebuttal and surrebuttal, with respect to expert testimony could only be defended upon the ground that juries were as well informed regarding the specialties of the experts as the experts themselves, and therefore intelligently decide which to believe and which not to, an assumption too grotesque to be entertained by any educated person.

Many of the matters concerning which expert opinion is desired are susceptible of *probable* determination only; they cannot be ascertained precisely; and regarding such matters differences of opinion as to the weight of probabilities may often be reasonably entertained, and that too by men of equal scientific eminence. As a consequence, when such subjects are the objects of investigation, it is not difficult for opposing attorneys to produce a Roland for the others Oliver. And is any one so guileless as to suppose that experts will be summoned by either side before its attorneys have sounded them as to the nature of their testimony? It is this possibility, nay very actuality in practice, that tends to lower the value of expert testimony from the plane of sincerity to that of specious advocacy. In reality the expert is nothing more in the great number of instances than an attorney that tries to conceal his idenity behind the aegis of science.

What the expert is summoned for, and the only justifiable ground upon which his testimony can be admitted as evidence, is to decide matters not within the common experience but with which he is familiar by virtue of special study and experience. The ordinary witness testifies to the reality of the particular things which in his perception and apprehension were spontaneous and independent of any conscious effort on his part; whereas the expert gives opinions and conclusions reached by conscious logical correlations of all the facts, direct and collateral, appertaining to the matter submitted to him. The judgement or opinion of the expert is the matter to submit to the jury, and which they can connect as it may fit with tbe other facts and probabilities involved in the formation of their verdict. The scientific competency of the expert, or the processes of ratiocination by which he reaches a conclusion or opinion are no more matters for the jury to pass upon than is the legal competency of the judge who presides a fit subject for their determination.

The solution of the matter, and one that has so often been indicated, is to take the selecting of the experts out of the hands of the opposing interests. In cases in which the determination of some scientific point was essential to the formation of a correct verdict, obviously the logical method would be to submit the determination of the scientific question to scientists. In practice this could be best done by assembling a number of experts in the specialty involved to act as the scientific advisers of the court, or even as a scientific jury, who should consider the material facts appertaining to the point to be determined and render to the court a written opinion. This written opinion would then, if deemed relevant, be very proper matter to offer as evidence of fact, or of probability, for the guidance of the jury. The selection of the experts should be vested

in a legally constituted board, composed of representative scientist chosen as might appear best from among the scientific institutions and associations of the State. When some such method of dealing with expert testimony as here suggested shall have been inaugurated the evidence of experts will be an aid in the elucidation of the truth, and not, as it is at present, a reproach to the legal intelligence of the country.

HOPELESS CASES.

Consult any or all the text-books on a case of arthritis deformans, for instance, and you will find the outlook most discouraging. Some authors state positively that it is hopeless, others that there is a mere possibility of improvement. This disease was discussed at the Montreal Meeting of the British Medical Association last September and the treatment was most discouraging.

A case of arthritis deformans comes to a man in active practice and he consults the text-books or remembers some case seen in his student days and nine times out of ten he tells the patient that it is hopeless or what amounts to the same thing sends them away discouraged. The case drifts to a young man just out of school and while he has plenty of time to try, he or the patient may lack confidence. The young physician notes the discouraging outlook given these cases by all authorities and instead of making an effort to encourage the patient, and then exhausting every resource at his command before giving the case up as hopeless he tries in a half hearted way or allows it to drift on to some one else.

This sort of thing is not as it should be. There should be a change made in the books by authors of authority and instead of stating these cases to be absolutely hopeless they should outline all methods of treatment and advocate a persistant effort being made on each individual case before giving up. Busy practitioners who have not the time to spare which is demanded by these cases can easily turn them over to some practitioner who is not so busy and watch their pregress under his hands and occassionally help him with a suggestion.

Within the past two years several cases have been reported in which there was great improvement in cases of long standing, by the use of plaster of paris casts and massage. If each member of the profession would take hold of these cases and no matter what others may say stick right to the case and exhaust every resource before pronouncing any case hopeless medical science would progress faster than it does and there would be fewer diseases regarded as hopeless in our text-books.

I have used arthritis deformans only as an illustration, as there are many other ills to which the above remarks apply. Many cases of organic heart disease could be relieved for a time and many lives prolonged if more practitioners would loose sight of the hopeless element in these cases. Encourage the patients; teach them how to care for themselves; insist upon their living under sanitary conditions; and exhaust every resource at command before giving up any case as hopeless. In this disease the result is invariably fatal, but with proper training of the patients and careful treatment many lives could be prolonged that are now cut short by medical men being too thoroughly impressed with the hopelessness of the case. They state positively to the patient or friends that there is no hope in many cases, and then allow them to drift into the hands of others. Instead of stating positively there is no hope, take time to explain the nature of the trouble and impress them with the idea that by proper living and careful habits they can do much, with your help, to better their condition and many useful lives will be prolonged.

THE PHYSICIAN AND THE CONDUCT OF LIFE.

The ancient had their Nemesis. In the scriptures it is written "Whatsoever a man soweth, that shall he also reap." And the agnostic Huxley has given expression to the same sentiment in the following: "There can be no alleviation of the sufferings of mankind except in absolute veracity of thought and action and a resolute facing of the world as it is, with all the garment of make-believe thrown off." The physician becomes acquainted more than does any othey worker (except possibly the clergyman) with the practical application of this principle; indeed, every hour in the day he sees its demonstration. For instance, there comes to him the lady of fashion, who dresses to invite pneumonia and encases her waist in stays in a manner to prove absolutely fallacious the mathematical axion that a larger object cannot be encompassed by an object relatively smaller. She eats rapidly of indigestible food and at irregular hours. She spends the mornings in the shops. Then come matinees, calls, lectures, teas, the theatre, the opera, dances and receptions. She rushes in mad haste from function to function. Thus does she continue

on her unphysiological course until it be comes a question which shall precede the other, the end of the social season or her own complete collapse. Then there is the man on change who values fortune above health. He spends the day either among the nervous, shouting, madding crowd on the floor of the exchange, or in his office scanning the financial columns in the newspaper or watching the telephone and the ticker. At all times his mind is given to the formation of schemes, deals and combinations. He lives under the stimulus of excitement until finally there comes a momentary tugging at the heart, there is a look of anguish, the hands close over the præcordium, the face becomes purple, there is a gasp, and the cord of life is snapped Then there is the old sinner, who commits excesses of all sorts and who, like the roe in the play wants the doctor both to condone his debaucheries and at the same time to keep him in good health. Vain expectation. And then there is the young girl infected with loathsome disease, who comes, white-faced and trembling, to the only human being who can and who does help her and hides her shame and her secret behind his office door. Some among the many signs which point to infringements upon this natural law are premature gray hair, premature baldness, stooping shoulders, a shambling gait, a pale or a weazened face, a clammy skin, the wandering eye, which looks anywhere else but straight at the person addressing its owner and the "terrible smile" mentioned by *The Autocrat of the Breakfast Table*, which is characterized by "the cowardly behavior of the eye and the tell-tale weakness of the lips."

MENTAL GROWTH AND DEVELOPMENT.

The laws of physical growth are well understood. While the intimate nature of the vital processes will probably always elude detection, yet the general principles of animal and vegetable growth are fairly well grasped and understood. We know, for instance, that a continuous supply of nutriment is needed. To stop feeding for any prolonged period means retrogression, decay, death. We know that the pabulum affects, in a decided way, the plant or animal which it nourishes. The flavor of the famed canvas-back is only a trite illustration of this.

Tree growers claim to be able to color the wood at pleasure by using various dyes in the soil around the tree. In medicine every one knows the disastrous effect of the prolonged use of an exclusively salt meat diet. The effect of environment as modifying the physical organism is felt everywhere. But is the medical profession (not to say the laity) alive to this same principle in mental development? Mental growth proceeds along the same general lines as does physical growth. The same laws in general apply.

What is the mental pabulum of our boys and girls, and how is it used? The modern school system has many sins to account for, but none more urgent than the sin against the mental development of the child. Subject matter is given to the child of such a nature and in such a form as to warp and bend the mental mechanism of the child out of its normal lines. Close application, unnatural positions, crowded rooms all tend to deteriorate the child physically. These dangers we see and know and endeavor to guard against. But are we so much interested in the mental food given the scholars of our schools? Are we sure there is being furnished a continuous supply of proper mental pabulum? Many of the children in the schools are being starved to mental death by the kindest and best natured of teachers. The mental food is unsuited both in kind and quantity. It would be just as sensible to feed a nursing babe on chestnuts or pea-nuts as to force into our little ones much of the stuff they are compelled to commit as a part of their education. It is well that we awake to the ultimate effect of such false education.

There can be no possible doubt of the increase of neuroses. Everywhere and in all classes, diseases and diatheses of this type are becoming more pronounced. At the present rate of increase not many generations will have passed away before we become a race of toothless, spectacled neurotics. This is the era of preventive medicine. Prophylaxis is the watch word for the twentieth century.

It becomes the physician then, as the guardian and watchman, to give no uncertain sound in the matter of the mental development of the coming race. Give as much thought, investigation and surveilance to the pabulum for the growing mind as for the growing body, and the treatment of numbers of neurotic cases is accomplished.

THE NEED OF THE EXERCISE OF GREAT CARE IN MAKING A DIAGNOSIS.

A great many physicians exercise too little care in making a diagnosis in certain cases. They make up their minds that it is nothing serious, and call it something indefinite, not stopping to think whether

there will be a future for it. But there is a future for most cases. For instance, the first time the patient applies for insurance on his or her life, unless he or she is dishonest, will tell what a certain physician said in regard to some previous illness. Of course the examiner must record it, for he has no way of finding out the truth, as the applicant can tell him only what the attending physician said. The examiner sends in his report to the home office, and when the medical director comes to that answer he don't know what to do with it and sends back for further information, which of course cannot be obtained if the examiner was thorough in making up his report. For instance, the writer knows of a case that in answer to the question, "did you ever have any disease of the kidneys?" the applicant said that about a year before he had some kidney difficulty, and the attending physician said there was blood in the urine. The result was that when the report was sent in the medical director rejected him, because it was so indefinite, as there are so many conditions in which there might be blood in the urine, some trifling and some serious. Now my candid opinion is that in this case the attending physician did not have a microscope.

Those cases, of course, are put on record against the applicant and will be a cause for rejection whenever he applies for insurance, as the medical director is in most cases hundreds of miles away and cannot examine the case for himself, but must depend upon the local examiner. This is only one of several cases which I might cite, which is a disgrace to a science, which while it cannot be exact, yet should not be so from mere carelessness on the part of the profession.

AUTO-INTOXICATION.

In looking over the recent statistics of typhoid fever, treated according to the Woodbridge method, I am inclined to think more strongly than ever, that the method has been given credit for aborting typhoid fever a great many times when the real trouble was simple auto-intoxication. But that is nothing against the method of treatment, as it is a rational one, even in the last named condition, but any antiseptic method of cleansing the bowels would produce the same result. The writer has had hundreds of cases, I dare say, presenting all of the symptoms of typhoid fever, except the "rose spots," and those seldom appear before the beginning of the second week, begin to recover at once after a thorough antiseptic flushing of the bowels. However, I think that Dr. Woodbridge, more than any other man, deserves the credit for the almost universal use of the rational antiseptic cleansing of the intestinal tract in diseased conditions. And right here let me say that we should make, at least, an effort to dispel from the lay mind, the firmly fixed idea that in order to produce a toxic, or poisoned condition of the system, the poison must be introduced from without. It is very hard for them to understand that a poison can be elaborated within the body, as in the intestinal tract, and from there taken into the circulation, producing all the symptoms of toxæmia, the same, virtually, as if it had been introduced from without the body. I recently treated a case of auto-intoxication in which the temperature was for a short time 106 deg., and when I tried to explain that the trouble was due to the absorption of poisonous material from the intestinal tract, the parents said that the child had been eating berries that day and asked if I did not think that he ate a poisonous bug of some kind? Now if we could make them understand that in those cases it is not always necessary to introduce the poison from without, it would be much easier to manage them.

COUNTER-IRRITATION.

Some recent experiments reported by Prof. H. Kronecker and Dr. A. Marti would appear to have an important bearing in the elucidation of some of the observed effects of cutaneous irritation, the philosophy of which has for some time rested chiefly upon the investigations of Brown-Sequard. Clinical experience had long shown the utility of counter-irritation in some diseases, but the modé of action was not evident, and because it was not understood some therapeutists were inclined to doubt, if not even to deny, the efficacy of epispastics. However, when Brown-Sequard, and others after him, showed by physiological experimentation that irritants applied to the skin, while dilating the cutaneous vessels, caused contraction of the vessels of deeper structures, empirical experience found some scientific support and it was proposed to explain the clinically observed results of counter-irritation upon a purely physical theory, that only so much blood being in the body, it was evident that if a part of the blood was caused to accumulate in a particular part of the body it could not be in another part at the same time; and, therefore, inasmuch as counter-irritants did cause an abnormal determination of blood at a point on the surface they

necessarily diminished congestion of internal and deeper structures.

So far as relief of internal congestion alone was concerned this explanation was rational and adequate, but the theory, however, could not be made to fit other observed results of cutaneous irritation, such as the occurrence of duodenal ulcers after extensive burns, reflex headaches from gastric irritation.

That cutaneous excitation exerted a modifying influence upon trophism in general appeared to have been foreshown, and even demonstrated, in many of the reflex phenomena, but a rational explanation had not yet been forthcoming, and it is the relevancy of Kronecker and Marti's researches to this aspect of the question that invests them with peculiar interest. According to *Nature* (Vol. 56, No. 1442) Kronecker and Marti have found that feeble irritation of the skin promote the formation of red blood corpuscles, but modify the formation of hæmoglobin in different ways; and that strong irritations of the skin determine a diminution of the number of red blood corpuscles and in a minor degree of the hæmoglobin of the blood. They found that continued exposure to intense light, even at night, with electric light, induced the formation of red blood corpuscles, and in a less degree that of the hæmoglobin. They also found that darkness diminishes the number of blood cells; a minimum being reached in about a fortnight, after which there was a limited rise. The confirmation by other experimenters of these interesting results will be anxiously awaited, as obviously their accuracy and invariableness would throw much light upon the yet recondite phenomena of counter-irritation, and undoubtedly lead to a more scientific knowledge of the use of counter-irritants in therapeutics.

DEGLUTITION IS A WONDERFUL FUNCTION.

In 1862 Dr. Frederic Semeleder, now of Mexico, then of Vienna, beautifully demonstrated auto-laryngoscopically, the larynx in swallowing to be closed by three valves, (1) the vocal bands closed, (2) the breath bands, (3) the epiglottis closed, thus was disclosed the wonderful triple bars to keep food from the trachea which here includes the larynx and bronchi and which comes in close relations with æsophagus. In fact the larynx posteriorly and the æsophagus anteriorly at the inlets are one. The inter-arytenoi band and the front of the gullet are the same. During respiration the back wall of the larynx lies close to the body of one of the cervical vertebræ. In deglutition, the pillars of the soft palate, contract and pull upwards and outwards the larynx. The gullet is opened and the three aforesaid valves are closed. Then the tongue rises against the hard palate crushes and rushes the food into the gullet, then all at once the pillars relax their hold of the trachea when it pulls itself down like a spiral spring shoving the bolus where the constrictor muscles peristaltate the food downward to the stomach. That the trachea acts as a spring is seen by putting the forefinger tip gently on the pomum adami during deglutition and by the immediate recedence downwaads of the trachea when cut through.

Dr. Benjamin Cutter had a case of attempted suicide who severed the trachea completely in place of the jugular veins. Here the trachea receded one inch. Drawn up, it would spring back when the hold was released, by the cartilaginous rings of the trachea being shaped like horse shoes, their ends being approximated when the palate pulls up and elongates the trachea and springing outwards when released, like a spiral spring. It is believed that the trachea presents the only instance of this spiral spring action found in the human body. No doubt the spiral sweat ducts expand and contract with the skin, but the sudden loosening of the hold of the trachea and the immediate spring downwards are unique in biology.

THE DRUG TREATMENT OF SUMMER DIARRHŒA IN CHILDREN.

In these days of non-medical therapeutics, so much is being said about the extraordinary methods of treating summer diarrhœas that the young practitioner looks askance at its treatment with drugs and the old physician with settled and fixed views is liable to be driven from his moorings or relegated to a past era. Lavage is a refinement which few family physicians will want to practice and to which fewer children can be compelled to submit. Colon irrigation when successfully practiced sometimes acts charmingly. But practiced by the most skillful attendant upon the most tractable subject, after the stomach and colon have been flushed and sterilized, there yet remains many feet of small intestine far beyond the reach of local treatment applied through either stomach or rectal tube. This stretch of bowel may be a veritable augean stable, swarming as it does with poisonous ptomaines and bacteria. The problem

which confronts the physician at the bed side is "how to cleanse the small intestine and correct the secretions, bringing them back to their normal condition as quickly as possible." The great physiological intestinal antiseptic is healthy bile. Secure a flushing of the intestinal canal from the pylorus downward with normal bile and in the large majority of cases the disease will right itself under a carefully regulated diet. The one medical agent which will do this most speedily and satisfactorily is *calomel*. Given in small doses of from one eighth to one fourth grain with a small quantity of sodium bicarbonate or sugar it fulfills every indication in beginning the treatment in these cases. If the stomach is irritable the calomel may be given on the tongue with a small quantity of sugar or saccharated pepsine and it acts as a sedative of the highest order while it is producing and sending onward a flow of bile such as no other drug will do in the same time. Acid, sour-smelling, grass-green, serous or chalky stools, or stools smelling strongly of sulphuretted hydrogen indicate calomel. Indeed it is a good treatment in all cases to get the specific calomel stools at the earliest possible moment. It is good practice to give with the calomel a few grains of sodium bicaraonate if the stomach is not too irritable to bear it. If the child be continuously vomiting small doses dry on the tongue act admirably. It may be necessary to give small doses of an opiate to procure rest for the child, and to stop the dreadful waste in cases of serous diarrhœa, But opiates should always be avoided if possible until the calomel stools have been obtained. Once these are present then the so-called intestinal antiseptics, bismuth naphthol, salol, *et al* may be used to advantage during convalescence. A homely remedy of decided utility is the spice poultice over the epigastrium. H. C. Wood points out that this should always be made with boiling water as heat is necessary to set free the essential oils on which the efficacy of the spice plaster depends. Diet and local treatment are always of importance but we are apt to forget the medical part of our resources and among these medicines small doses of calomel frequently repeated until its specific effect is secured stands primate.

HOW AND WHERE TO BUY DRUGS.

Many of our physicians have for years been handling their own drugs and fillling their own prescriptions when practicable. We favor this plan for several reasons; first of which is the necessity for the doctor knowing that the drugs are of first rate quality, and secondly, he should know that the patient gets what he wants him to have. These are prime reasons; and again the patient likes to know that his physician sees and knows that every thing is all right before he takes the dose. Then there are many things he would have no one else know, and which he fears they may find out from the prescription. And then they prefer to do their trading at one place.

We believe that most doctors should fill their own prescriptions. That they should buy none but the very best drugs put up by some competent manufacturer, who experience has taught them is reliable; then buy these drugs just as cheap as they can. The way to do this is to buy in large quantities of the principal kinds to be used, and submit these orders to the manufacturer himself, or some jobbing house for bids. Buy enough to last a year or more and you will be surprised how much cheaper it is than buying by the ounce. The writer of this article has never had much satisfaction in dealing with the so-called "physicians' supply houses,' finding it cheaper in the long run to buy of the local druggist, but even this does not pay, for while all smiles at your patronage, he is not so well pleased at selling you for fifteen cents what he would sell to your patient for fifty cents, and soon is legging for your competitor across the street who sends his prescriptions there for filling. After much experimenting on the matter of buying he follows the plan above laid down, and now saves from twenty to thirty per cent. on the goods he has to buy.

THE MANAGEMENT OF OCCIPITO-POSTERIOR PRESENTATIONS.

The accoucheur in active practice will, in a nearly certain ratio, meet with cases of this presentation. The causation we will not discuss, till theorists agree as to the cause of *any* presentation, and especially as to the cause of rotation in labor. The busy man must be satisfied to take the conditions as he finds them and be able to make the best of them. This abnormality will be found most often in primiparæ. It will be accompanied, *especially* in primiparæ, with tardy dilation and ineffectual suffering. It may be diagnosed by finding the anterior fontanelle under the pubic arch, if one can be sure of what he feels. The only way to make a positive diagnosis is to pass the hand into the uterus during complete anesthesia and find an ear or some other prominent landmark. This makes clear the posi-

tion. Given a positive diagnosis what shall we do? *Wait.* Especially is this true in multiparæ.

In between thirty or forty occipito-posterior cases the writer has seen but one case and that a multipara, who delivered herself in this position. Five or six other multiparæ all rotated spontaneously.* Indeed in a recent case delivered with the long forceps, the writer saw the rotation actually take place with the forceps in position. An old pattern of forceps seemed specially intended for this, as the blades were fastened to the handles by means of a swivel controlled by a screw. A good rule in these cases is "always give multiparæ plenty of time." In first labors there is not much to be hoped for in waiting.

Three expedients present themselves when interference is demanded, viz.: Podalic version, manual rotation, and delivery with the forceps without change of position. In fairly expert hands podalic version offers a chance of good success. For the average physician it is too radical. Manual internal rotation is at times easily accomplished. When the woman is completely anesthetised, with the exploring hand making a diagnosis. it is sometimes easy, with favoring conditions to throw the head around with the occiput to the front, the trunk of the fœtus following. If, however, the head be impacted this is nearly impossible. When the waters are drained away, and the uterus fits closely to the body of the child, podalic version is more easily accomplished than internal manual rotation. The treatment which will be suitable for most cases with the average practitioner is the use of the forceps. The woman should be completely anesthetised and delivery accomplished very slowly. She should be placed with her hips well over the edge of the bed, so as to give clear space for operating the handles. Traction should be very steady. Precipitate delivery is to be avoided unless some urgent condition of mother or child demand rapid delivery. The head may be well drawn out so as to pass the perineum without doing excessive damage if the operator will take the neeessary time. Complete anesthesia will relax and soften the maternal parts and by directing the opposing force to the bregma of the child as much as possible, a fair proportion of cases may be delivered without much injury to the perineum. The operator, by means of the handles of the forceps, can guide the head almost as he pleases. By alternately raising and lowering them he compresses and draws out the head against the pubic arch, and distends the perineal body until it thins out and stretches to the utmost possible limit. There will always be some cases, however, in which the perineum will tear in spite of every precaution. If the rent is excessive, it must be repaired. A slight tear need give no concern if the attendant be aseptic and the patient receive the antiseptic douche. The long drawn out head of the child soon returns to its proper shape. The one maxim to be most strongly impressed in these cases is, "*avoid all haste*," first in applying the forceps, next in making the extraction.

DISEASE.

Disease is variously defined by different authorities, as a derangement of the vital functions in which the natural action is disturbed, with or without causing pain; or it is any deviation from the standard of health, in any of the component materials or functions of the body; or it is a condition of the body marked by inharmonious action, of one or more of the various organs, on account of abnormal condition or structural change.

From the above definitions we must conclude that disease is a process which takes place at times in the living body; causing structural change and perversion of function. To properly understand disease it is necessary for us to know what is the standard of health, for this purpose we will consider the body to be composed of fluids and solids; the fluid components are the blood and secretions; the solids composed of five different structures, neryous, muscular, capillary vascular, secretory, and fibrous; this matter which constitutes the living body is endowed with the properties common to all living organized matter; that is, vital affinity and susceptibility. When these fluids and solids are properly nourished, and their functions in correct relation to each other, we have in the body perfect health. The condition of disease is brought about by lack of nourishment to an organ, or group of organs, or structure; for instance, there is a condition of the liver due to an excessive secretion of bile, copious bilious diarrhœa, griping and nausea. In this there is the phenomena produced by an increase in the secretion; then there is the opposite condition, furred tongue, disagreeable taste, flatulence and constipation, which characterizes a lack of sufficient secretion of bile; then there is the condition in which nitrogenous matter is not converted into urea. but causes the formation of lithates, and lithic acid in the blood, producing the group of symptoms known as lithæmia. This condition is brought about by perversion of function. So we may trace all the organs and structures of the body; when

diseased their function or structure is either increased, diminished or perverted, and the primary cause of the increase, diminution, or perversion, is something that interferes with their proper nourishment.

THE TONGUE IN DISEASE.

For examination the tongue should be protruded as far as possible, and the whole surface should be inspected. An abnormal appearance points (1) to fevers, (2) to local lesions, (3) to some disorder in the digestive tract, or (4) to various morbid conditions not included in the first three divisions.

1. In fevers the tongue is generally coated or furred, dry, sometimes fissued, and is apt to look dirty and the mouth to be bad smelling. In typhoid, when a brown, furred tongue becomes darker and thicker, and sordes appear on the teeth and lips, the condition is serious. When the tongue begins to "clear up" we expect convalescence; when the coating re-forms, we fear a relapse. The tongue is tremulous in severe fevers, where there is extreme exhaustion. Occasionally there is an abnormally red tongue, due to denuding of the epithelium; this appearance may at times be detected beneath the coating.

2. A coated tongue may be caused by decayed teeth, or enlarged tonsils, or excessive smoking. Other local manifestations are the mucous patches of syphilis, which especially in children, must not be confounded with the patchés of stomatitis. Chancre may be found, or there may be circumscribed swelling and hardness, which would mean either syphilis or cancer, to establish the diagnosis between which it may be necessary to cut out a piece for microscopic examination. Depressed scars upon the surface would indicate healed specific ulcers. We may find in epileptics scars due to biting the tongue. Finally the tongue may be stained by drugs, or acids or alkalies.

3. A furred or coated tongue occurs in disorders of the digestive tract. Constipation produces this; or a brown furred tongue with a bad taste may appear the "morning after" the patient has wined and dined generously. A coated tongue with a yellowish hue would draw attention to the liver. When the tongue looks raw, like beefsteak, and of an unnaturally clean, smoothe and perhaps glazed appearance, it points to gastric or intestinal irritability; this means shedding of intestinal epithelium with consequent loss of power of absorption —a serious condition, for here the supply of nutritive material to the system is interfered with.

4. The color of the tongue is affected by that of the blood: thus, a pale, flabby indented tongue, indicates thin and poor blood, as in anæmia and chronic wasting diseases. It is said that "a swollen and indented tongue, presenting also a sort of silvery sheen, suggests menorrhagia. The tongue is dry in diabetes and in other conditions where the bulk of urine is large. It is tremulous in chronic alcoholism, in many nervous diseases, and in lead and mercurial poisoning. A tongue looking as if covered with white paint is characteristic of malaria. The "strawberry tongue" of scarlet fever is bright red, with the papillæ prominent.

THE PREVENTION OF PUERPERAL FEVER.

Puerperal fever is caused by septic infection of some lesion of the genital tract, during child birth. Rigid antiseptic measures adhered to before, during and after labor, will in all cases prevent the disease. At the beginning, when the first pains are felt, the woman should be instructed to take a full bath, and to so arrange the lying in chamber, and the parturient bed, that there can be no danger of infection from any of her surroundings. The physician should not attend a case of labor after having attended or treated, any septic disease or injury, until he has thoroughly disinfected his body and changed or fumigated his apparel. The hands should be sterilized by scrubbing with soap and water and the nail brush, removing any sub-ungual accumulation, then bathing with an antiseptic solution, such as one to five hundred bichloride solution, pure alcohol, or five per cent. carbolic acid solution. One to five hundred bichloride solution in glycerin should be used as lubricant for fingers. Diagnosis of presentation and position should be made as far as possible by abdominal palpation. Digital examination per vagina should be limited to the minimum. The membranes should be allowed to rupture spontaneously. Watchful expectancy should be the treatment until there are indications for interference. The placenta should be delivered by the Crede method. Any retained placenta must be removed immediately.

The best known methods must be employed to prevent perineal laceration, but when such occurs it should be repaired at once under rigid antiseptic precautions. All instruments should be sterilized before using, by boiling for half an hour. Twenty minims of the fluid extract of ergot should be given at the end of the second stage. At the end of the third stage the vagina should be irrigated with warm sterilized

water. In all cases where intra-uterine manipulation, either manual or instrumental is necessary, an intra-uterine irrigation should be used. The napkin to be used during the puerperium should be of sterilized absorbent cotton.

ACUTE ALCOHOLISM AND TRAUMATISMS.

The diagnosis is often difficult and sometimes quite impossible to make, the symptoms of the former in many cases simulating those due to traumatism. However, in uncomplicated *acute alcoholism* there will be the odor of the breath, subnormal temperature, slow and labored pulse and stertorous respiration; the pupils will probably be dilated but may be normal or contracted, they are not likely to be unequal. The tongue will be furred and there may be vomiting of food and alcohol. The face will be bloated and flushed if the debauch has been recent, otherwise the skin will be pale and clammy. The motor power will be partially or entirely lost and the entire muscular system will be involved in the change. There will be drowsiness merging into insensibility. If subjective symptoms can be elicited, headache, dimness of vision, anorexia, uneasy sansation in epigastrium, lassitude and depression will be complained of. Finally there may be delirium tremens. As to *traumatisms.* First, there should be rigorous inspection for external marks of violence, which, if they exist, would indicate internal injury of more or less gravity. But the converse is not true, for sometimes extensive internal injury occurs without any external mark. In all cases of severe trauma, there will be symptoms of shock, primary shock following immediately upon the injury, will exhibit a subnormal temperature and a small and fluttering pulse. The patient will be faint and trembling, there will be nausea and vomiting, the skin will be cold and clammy and the sphincters will be relaxed. Secondary symptoms are dyspnœa and tumultuous heart action, headache, sleeplessness and a diminution of mental powers. The following phenomena are referable only to *head injuries* and are not likely to be found in uncomplicated alcoholism. When blood is wiped from a suspected part and no fresh blood appears, there is simply a suture; if fresh blood oozes to the surface there is a fissured fracture. Fracture of the base is indicated by hæmorrhage from the nose, mouth and ears and ecchymosis into the conjunctiva or subcutaneous cellular tissue; or vomited blood may have been swallowed after fracture of the ethnoid or sphenoid, followed by hæmorrhage through the posterior nares; but absence of such hæmorrhage does not necessarily indicate absence of fracture. A rare but positive symptom of fracture of the base is the escape of a watery fluid, probably cerebro-spinal in origin, often copious in amount, from the ears, the nose or the mouth. Fracture of the petrous portion of the temporal bone involving the tympanum may produce in the temporal or mastoid region a pneumatocele, a smoothe, circumscribed, resonant non-fluctuating tumor. Among intracranial affections cerebral irritation presents characteristic symptoms; it usually follows a blow upon the temple or the forehead and is probably associated with laceration—more especially of the gray matter—of the brain substance. The patient lies on one side, is restless. the eyelids are firmly closed and the extremities are flexed. If the eyelids are forcibly opened the pupils are found contracted and intolerant of light. The surface is pale and cool or even cold. The patient is irritable, and mutters and grinds his teeth when disturbed. The sphincters are not usually affected, and there is no stertor. There will be a rise in temperature in head injuries, except in primary shock and in large uncomplicated hæmorrhage, when there is likely to be sub-normal temperature. Other signs of intracranial lesion are photophobia, with the lids firmly closed, intolerance of sound, the carotids beating forcibly, a blowing of the lips and a flapping of the cheeks, the *Cheyne-Stokes* respiration, rigid contraction of limbs and clonic or tetanic convulsions. Unilateral phenomena, *e.g.*, unequal pupils or ptosis of one eyelid or drooping of one corner of the mouth, point to intracranial lesions; there may with such lesions be found in the radial pulse a want of symmetry in fullness and strength upon the two sides of the body. In conclusion, "when in doubt" act as if the case was one of traumatism. And, in a suspected case keep the patient under observation until the effects of a debauch have worn off, symptoms of head injury which may have been masked by the acute alcoholism, may then become manifest.

ACIDULATED GLYCERIN IN THE TREATMENT OF DIABETES MELLITIS.

On account of our limited knowledge of the pathological changes which characterize diabetes, and an inability to determine with any degree of exactness, which organ or group of organs is most at fault in the disease, it necessarily follows that our treatment be at least, to a certain degree, empi-

rical. When we have paid the proper amount of attention to the hygienic and dietetic part of the management of the disease, it will be well to consider the medicinal treatment with glycerin acidulated with citric acid, as advanced by Prof. Davis, Sr., of Chicago. There does not seem to be any rational explanation of the favorable therapeutic effect of the acidulated glycerin, any further than that it does good. The mixture should be chemically pure glycerin, in which is dissolved from two to four grains of citric acid to the drachm, to be given in gradually increasing doses, from one-half to one and one-half drachms, well diluted with water an hour after each meal. Care must be taken, during its administration, that the increasing doses of glycerine do not cause intestinal trouble. The above treatment will, in the great majority of cases, have a very decided beneficial influence; relieving the great thirst and ravenous appetite, lessening the excessive flow of urine, and diminishing the amount of sugar contained therein, and establishing for the patient a fair degree of health. The treatment will not prevent the occurrence of a relapse, but when such an event occurs the treatment will, as a rule, have the same favorable effect as was obtained on its first exhibition.

BIOLOGY OF MUSIC.

The biology of music is not considered as much as it might be. Music is intimately connected with the science of life. Laryngology has shown how the voice in song is produced, and before 1870 discovered in America that speech and song are alike save in the length of the basic vowel sounds. Investigation of the serrations of phonographic cylinders in England confirms this. Based on this idea the query arose whether there should not be laws for phonation like those of song? Already one law has been laid down that phonation should be in the chords of the key note of the auditorium, as music is most effective in the key note of the auditorium.

This principle has been found correct in medical meetings held in the Music Hall at Cincinnati, holding six thousand people, and in the Town Hall, Leeds, England, and elsewhere. Phonation thus expressed was found to be easy of delivery and easy to hear, and was a great success where failures were predicted and made in speech. A large task awaits some musical physician to further apply the laws of musical harmony to speech to attain perfection.

The relation of music to mental physiology (psychology) have been most uniquely and permanently brought out by T. Ackerman Coles, M. D., of Newark, N. J., who last year gave to that city a life size group of three persons in bronze, showing the power of music as a mnemonic, and also serving as a monument of his father Abraham Coles, M. D., LL.D. The story of it is that in 1764, Col. Boquet, commander of a fort where Pittsburg is, carrolled Indians with their white captives. He summoned those who had lost friends to come for them. One group, where a young white wife had wed a chief, after growing up, having been taken from her home at the age of two and a half years. The agonized mother knew her daughter, but the bride did not recognize her mother until the latter sang a lullaby that she used to sing her to sleep with. Instantly music reached memory; mother and daughter rushed into each others arms and were locked in loving embrace.

Dr. Benjamin Rush relates that an insane man was cured by hearing a tune sung that his mother, long since dead, used to sing.

Prof. Dogiel, of Kazan, Russia, has shown that music increases the force of the blood circulation. His experiments still stand. Since fatty degeneration is chiefly due to retarded and impeded circulation, music has been deemed a beneficial remedy to restore the aforesaid deficiencies. Hence the aged are advised to perform and to hear good music.

CAUSES OF FEVERS.

Fever, according to the definition in our medical works, is a morbid condition of the system, causing rise of temperature of body, quickens the heart's action, causing chills, pain in various parts of the body, loss of appetite, restlessness, and when severe and protracted will cause delirium, feebleness and emaciation. This definition although long does not explain what a fever is. A morbid condition implies a diseased condition. But we can have and often do have a morbid condition of the system without fever. Hence the above definition does not tell us what creates a fever nor what the morbid or diseased condition is due to. To ascertain the cause which creates this morbid condition with rise of temperature, etc., recent investigation and pathologists have demonstrated that it is a germ. This germ is a certain minute living organism which invades the system and which under favorable conditions has a detrimental effect upon the human body. These germs may enter the body in different ways, through the food we eat or drink, by inhalation, and by absorption through the skin. Any healthy person may have hundreds, thousands, yes millions of these germs in

the system and still enjoy good health. As long as these germs do not find the proper nourishment and the vitality of the system is strong enough to resist their influence, our bodies will not be effected by them. But if the vitality of the system has been reduced *c. g.*, by exposure as cold, excessive heat, pain, injury, exhaustion, etc., so that the *resisting power* comes below *par* and below the strength of the germ they will get the upperhand, find the proper nourishment, will thrive and cause disease. It is probably not so much the presence of the germ that causes the disease, but rather the excrement left by the germ which is impure and irritable to the tissues it comes in contact with. The excrement being absorbed will degenerate the blood, irritate the nervous system and thus the whole body gets out of order. The functions of the body being interfered with there is a certain amount of friction produced and consequently it will take more power and more waste for them to perform their necessary work. This causes a higher tension, and the higher the tension the more heat is produced. Thus *c. g.*, a machine will depart from its smooth running action as soon as dust and dirt interfere with the free motion of the wheels. It takes more power to produce the same work, this implies a higher tension and the friction thus produced causes heat which if it goes above a certain degree will cause destruction of the machine. Similar to the action of the machine is that of the human system, and the heat produced by friction due to disorder of the body is called fever. If this fever goes above a certain limit it will burn up the life of the body and cause death. Hence from the foregoing we may form a definition what a fever is, viz: *A fever is an abnormal excessive heat of the body caused by some germ.* What kind of a fever we are dealing with depends upon what kind of germ has infested the system. These germs may be more abundant in certain localities, also certain food may have a greater number of them imbeded and people who eat more of such food and live in certain localities are constantly attacked by them; hence they stand a greater risk of falling victims to these germs. Now it depends upon the number of germs and the resisting power of the system to determine the duration and severity of the disease. Thus,if two persons were infected with the same kind of a germ, and who had the same amount of resisting power, the germ would effect them both alike. But suppose the one person be infected by five thousand germs and another person by ten thousand germs, both having the same resisting power the latter would evidently suffer more from the attack of twice the number of germs, and naturally the disease in him would last longer. We know by observation that there are no two persons constituted exactly alike so as to have the same resisting power, consequently it is that we see the one sick longer with the same disease than a second one. Now if we can find remedies to kill or shorten the lives of these germs we will shorten the disease, provided the remedy itself is not used too strong or has the tendency to reduce the resisting power of the system. What kind of remedies are to be used depends upon what kind of germs we are dealing with; and the strength or quantity of the remedy must be in accord with the resisting power of the individual.

TOO MANY GYNECOLOGISTS SO-CALLED.

The advanced and advancing knowledge of diseases of women and the means of cure within the last two or three decades has doubtless been a great boon to females in their suffering, and many whose afflictions have been such as a few short years ago were thought to be incurable, have, by the proper application of correct principles as now taught and learned by men engaged in this line of work, been restored to at least comparative health and happiness. Yet I believe there are men in the profession attempting to treat female diseases as they may meet with them in their rounds of a general practice who are not qualified to even make a diagnosis; indeed I believe many of these would-be gynecologist cannot distinguish a version from a flexion, or an antiflexion from a stenosis of the cervical canal in a case of dysmenorrhœa, or I might say truthfully that some of them would hardly be able to distinguish a cervical or perineal laceration of moderate degree. Within the last few weeks two different young doctors have come to my office to borrow instruments of me, and when I questioned them closely neither of them knew exactly—indeed had a very vague idea as to what the pathological condition was, yet one of them was going to use a sharp curette in the cervical canal to cure a menorrhagia, which I am almost sure from his description of the symptoms, was the result of chronic endometritis with fungosities, while the other fellow wanted Goodell's dilator to relieve his patient, of a painful menstruation, when he was unable to tell me whether she had a flexion conical cervix with pin-hole os, or stenosis resulting from the vicious use of caustics,

&c., or really whether it was a case of obstructive dysmenorrhœa at all; indeed neither of the gentlemen had even examined his patient in an intelligent way, and yet they were willing to subject these poor suffering women to not only the humiliation, but the pain consequent upon their uncultivated methods of examination, and treatment as they are pleased to call it, in order to satisfy their desire to arrogate to themselves the qualities of a gynceological surgeon. Is there not much danger that this advanced knowledge which has proven a blessing to hundreds and thousands of women, may prove a curse to other hundreds of thousands by the improper application by incapable men? Would it not be far better if men who know themselves to be incompetent to do such work would call to their assistance a man capable and in every way qualified to treat these cases scientifically, and if necessary that can do such surgical work as may be indicated. I believe every man in the profession should fortify himself as well as he can to meet any emergency, but when we look around us the field is too broad to permit any man to occupy fully the whole ground.so that while we may not be particularly enamored of the specialty plan in our profession there can be no *doubt* but some men can do certain lines of work better than some other men, and those who follow the bent of their minds are more likely to be successful than those who scatter their energies, and endeavor to cover the whole field of medicine. In this age of advanced knowledge there may doubtless be found in almost every city one or more men who have specially prepared themselves for this work, and I believe it is nearly if not quite criminal presumption for any and every man who sports the title "M. D." without any special knowledge or preparation for doing such work, to undertake to palm himself off on his patrons as a gynecologist.

HOW TO CONDUCT YOUR OFFICE.

I stepped into a physician's office the other day and found papers, books and instruments strewn in profusion; a carpet, filled with dirt, and full of holes, on the floor; windows grimed with smoke; lamp chimneys that had not been cleaned for months; wall paper that had hung there for years, while cobwebs hung pending from the ceiling and fell in graceful festoons from every picture in the room,yet this man complains that he has not a great deal to do and especially not a large office practice. This brings us to the point we were about to make *e. g.*, the physician gives entirely too little thought to his office, consequently the very place, where he is to receive his callers and fasten on them the ties of friendship which will bring him dollars galore, is frequently in the condition noted above and he fails to impress the people, though ever so well qualified. Select for your office the best corner in the city (not at your home), take an upstairs room; furnish it as you would a parlor,then hire some one to clean and keep it in order if you cannot, or will not, yourself. A patient does not like to take medicine that he must associate in his mind with cobwebs, filthy cuspidores or soiled vaginal speculums; remember then that a filthy office will drive away the dollars you wish to attract. Having fixed up his office in the manner above indicated he will not find it so much of a task to stay there when business is dull; in fact he will stay there and study or be visited by his friends instead of expectorating tobacco juice on the grocery floor or swapping lies over the bar at the nearest groggery. We do not practice that high standard of morality which denies the physician the right to smoke or drink, but he must have a separate room at his office for the smoke and if he must drink why drink and go on about his business,but remember again that a successful physician must office in his office if he expects it to pay.

BOOK REVIEWS.

THE SURGERY OF THE RECTUM AND PELVIS. By CHARLES B. KELSEY, A. M., M. D., New York, Professor of Surgery in the New York Post-Graduate Medical School and Hospital. First Edition. 600 pages and with nearly 300 illustrations. Richard Kettles & Co., 129 Fifth Ave., New York City. Price, cloth $6.00, sheep $7.00. morocco $8.00, postpaid.

This is one of the most complete and elaborate works that has ever been issued. Coming from one of the most eminent writers, skilled and successful operators, it will be hailed with delight. There have been five previous editions of Dr. Kelsey's work on the Rectum, but the combining the pelvic organs with the Rectum is a combination never before attempted by authorities on Rectal Diseases. The present volume contains the latest modern ideas as regards diagnosis, prognosis, treatment, etc., etc., and the newest methods of operating. It is noticed that the writer retains his enthusiasm for clamp and cautery in the treatment of internal hemorrhoids. Dr. Kelsey admits the injection method to be useful in some types of internal hemorrhoids. In addition to the discussion of diseases of the

rectum, male and female pelvic disorders are analyzed in their surgical relations in a clear, concise manner. Hernias are considered in a clear, lucid style. The work is new in every respect; is printed on broad, heavy, clear paper; the illustrations are numerous and beautiful. On the whole, it is one of the most valuable books that has been given to the profession.

Appendicitis and Its Surgical Treatment. with a Report of Seventy-five Operated Cases. By Herman Mynter, M. D. (Copenhagen). Philadelphia: J. B. Lippincott Company. 1897. Price, $2.00.

There are many reasons for the cordial welcome which we are sure that this interesting book will receive. At a time when physicians are asking themselves whether or not the surgical treatment of appendicitis is the conservative one, the quickly healing and least dangerous method, this readable volume comes to show that appendicitis is a surgical lesion and ought to be treated by surgical means, and that medicine is unable to prophesy as to the result in a given case, or to prevent gangrene and perforation with resulting fatal peritonitis. The medical treatment is a makeshift, uncertain in its results, unable to prevent the often fatal complications, and therefore dangerous. The historical introductions of Appendicitis considered in the first part of this work is full of interest and information. It traces the disease from its earliest recognition, under its various names, down to its present universally accepted name. Following this is given a complete history of appendicitis with the surgical treatment in full, and we heartily commend this volume to the most practical as well as the most thoughtful members of the profession as the most intelligent book on the treatment of Appendicitis that we have read for a long time. The book is printed in clear readable type.

Traumatic Injuries of the Brain and its Membranes. By Chas. Phelps, M. D., Surgeon to Bellevue and St. Vincent's Hospitals. New York: D. Appleton and Company. 1897.

This is a concise and systematic exposition of the injuries which the brain suffers from external violence, a division of brain surgery which has the greatest practical importance and has received the least careful attention. This work will not only be of interest to surgeons, but also to the general practitioner. It comprises a volume of nearly twelve hundred pages, and in this age of encyclopedias and many volumes of systems and treatises by various authors, it is quite a treat to meet a book written by an accredited authority, with a definite purpose in view. There are not many writers who have been so fortunate in the selection of a subject. Prof. Phelps' original work along this line for many years have been generally followed and recognized, and the profession at large will unite with his many friends in according to the work the place which it clearly merits.

As a practical treatise for the use of students and operators it should find a place in every library.

The first few pages of the work considers the Preliminary Considerations of Cranial Fracture; next comes an extensive treatise on the Pathology, symptomatology, Diagnosis and Treatment, following in consecutive order.

Chapter VII opens with an interesting chapter on Pistol Shot Wounds of the Head in its Medico-Legal Relations.

Chapter VIII deals with Surgical Relations.

The last portion of the work gives the condensed Histories of Three Hundred Intra-cranial Traumatisms selected from a series of five hundred original cases. The book is beautifully printed, handsomely bound, and the illustrations are the very best. It is fair to assume that this work will be placed where it belongs, among the classics of surgical literature.

The Essentials of Obstetrics. By Charles Jewett, M. D., Professor of Obstetrics in the Long Island College Hospital, Brooklyn, New York. In one handsome 12mo. volume of 356 pages, with 78 illustrations and 3 colored plates. Cloth, $2.25. Lea Brothers & Co., Publishers, New York and Philadelphia, 1897.

The above book has been written for the medical student, but will prove very useful to the practitioner, who is more interested in practical discussions of disease and practical methods of treatment than conflicting and visionary theories. This work contains 356 pages, and embraces more desirable information than a great many works of double its size on the same subject. It touches upon all the essentials of this department of medical science. The first chapter is devoted to the anatomy of female genital organs. Then follow Physiology of Pregnancy, Physiology of Labor, Physiology of the Puerperal State, Pathology of Pregnancy, Pathology of Labor, Pathology of the Puerperal State, and Obstetric Surgery. The writer presents his matter clearly, chosen on the grounds of safety and good results. The illustrations are a valuable feature of this book. The work is well written, nicely arranged and well bound.

Manual of Mental Diseases. By A. Campbell Clark, M. D. Edin., F. F. P. S. Glasg., Mackintosh Lecturer on Pyschological Medicine, St. Mungo's College, Glasgow; Medical Superintendent of Lanark County Asylum, Hartwood. University Series. London: Bailliere, Tindall and Cox. 1897. Demy 8vo. pp. 484. Price 10s. 6d.

In the author's preface is found the following: Why a preface begins with an apology, I have never been able to understand. A book must stand or fall very much on its own merits, and an apology will not help it. Somewhat of a new departure, but nevertheless a wise one. The author has covered in a classification of his subject that is clear, systematic and logical, the history, etiology, clinical course, symptomatology, diagnosis, prognosis and treatment of mental diseases. He has treated the various divisions of his subject with as great brevity as possible, in order to render the work a practical guide, readily valuable to the busy practitioner in the diagnosis and treatment of the different types of mental derangement. The introductory chapters are devoted to the study of mental constitution and mental character, including mental health. Insomnia and its treatment are dealt with at some length. The various recognized forms of insanity are lucidly discussed in detail, and their explanation is materially assisted by a series of carefully selected clinical cases and by a number of excellent charts.

The volume is handsomely bound, well printed, and possesses a carefully prepared index. The book is lucidly written and the meaning clearly expressed. It is intended for the use of general practitioners and students, and to the general practitioner we cordially recoumend it. He will find it handy and useful for reference and of much practical value.

Lectures on the Malarial Fevers. By William Sidney Thayer, M. D., Associate Professor of Medicine in the Johns Hopkins University. New York: D. Appleton and Company. 1897.

There are few diseases toward the comprehension of which greater advances have been made within the last fifteen or sixteen years, and yet it is surprising how slow the general medical public has been in appreciating the true significance and value of the results which have followed Lavaran's discovery of the malarial parasite. The malarial fevers have been described from the earliest times, despite this fact, it is a melancholy truth that a large body of medical men in this country have scarcely passed beyond the limits reached by Hippocrates in their clinical application of continued fevers.

This work contains about 326 pages, and is probably one of the most valuable and readable books that we have had the pleasure of reviewing. Particularly to the Southern physicians will it be of special benefit, malaria being their most prevalent and often difficult disease to manage, The work contains nine lectures, written clearly and to the point. The book is well printed on good paper and makes a neat volume.

Hysteria and Certain Allied Conditions: Their Nature and Treatment, with Special Reference to the Application of the Rest Cure, Massage, Electrotherapy, Hypnotism, etc. By George J. Preston, M. D., Professor of Diseases of the Nervous System, College of Physicians and Surgeons, Baltimore, etc. Illustrated. Philadelphia: P. Blakiston, Son & Co., 1897. Pp. iv-9 to 298. [Price, $2.]

This is a very meritorious work. It is written in a very clear and pleasing style, with well executed descriptions. Any one who reads it will be greatly pleased and highly appreciate the skillful delineation of the mysterious and interesting condition of which it treats. This disease is sufficiently frequent in America to make it very desirable that we should have some systematic and generally accessible portrayal of the disease as it occurs here and the writer in this work approaches the mark. This presents the symptomatology and differential diagnosis of hysteria in as concise a manner as possible, and indicates the various therapeutic measures that have been found useful in this treatment of this disorder. The work recommends itself at first sight. The type, paper, binding and presswork are good, the illustrations are fine and the price reasonable.

The Origin of Disease. Especially of Disease Resulting from Intrinsic as Opposed to Extrinsic Causes with Chapters on Diagnosis, Prognosis, and Treatment. By Arthur V. Meigs, M. D., Physician to the Pennsylvania Hospital. Philadelphia: J. B. Lippincott Company.

This work is a substantial volume of 229 pages with one hundred and thirty-seven original illustrations. The plan of this work is excellent. An introductory chapter deals with the origin of disease from a most scientific standpoint, dividing diseases into two classes—those of extrinsic and those of intrinsic origin. Types of the former are small-pox and measles, which are caused by poisons that pass from one body to another. As a type of disease of

ntrinsic origin may be mentioned the formation of cysts in the kidney. Following the introduction is considered the disease of age and origin of disease. Next comes a lengthy discourse on the blood vessels with numerous plates showing the different pathological states in disease of the vessels. After this is considered the heart, lungs, liver, spleen, stomach, intestines, kidney, spinal cord, diagnosis in chronic disease, prognosis in chronic disease, and the treatment of chronic disease. We have read this treatise with great interest, for it is most scholarly, and complete. It is well bound and printed.

Essentials of Bacteriology. By M. V. Ball, M. D. Third Edition. Revised. Philadelphia: W. B. Saunders, 925 Walnut St. 1897.

These compends have served a great help to Medical students. This is a concise treatise upon the Practical Bacteriology of today, written mainly for the student. All Saunders' compends are good, and this one bears the same evidences of excellence as a compend as the rest do.

A Text-Book of the Practice of Medicine. By James M. Anders, M. D., Ph D., LL.D., Professor of the Practice of Medicine and of Clinical Medicine in the Medico-Chirurgical College, Philadelphia, &c. Illustrated. Philadelphia: W. B. Saunders, 925 Walnut Street. Cloth $5.50, net; sheep, or in half morocco, $6.50, net.

Dr. Anders has produced a good book on the Practice of Medicine, a book of nearly 1,300 pages. Its pages offer internal evidence that much labor and time have been spent upon it, and as the work of one man it is a creditable monument to industry, learning and good judgment. The book is divided into twelve sections. Section I, Infectious Diseases; II. Constitutional Diseases; III. Diseases of the Blood and the Ductless Glands; IV. Diseases of the Respiratory System; V. Diseases of the Circulatory System; VI. Diseases of the Digestive System; VII. Diseases of the Urinary System; VIII. Diseases of the Nervous System; IX. Diseases of the Muscles; X. The Intoxications: Obesity: Heat Stroke; XI. Diseases of the Pancreas; XII. Animal Parasitic Diseases.

Under special etiology the bacteriology has been prominently mentioned, since we owe to it the rapid progress that is being made in the study of the causation of disease. The differential diagnosis has in many instances been tabulated. Such formulæ have been introduced into the text, and only such, as a more or less extended experience has shown to be possessed of real therapeutic importance. Whenever dosage is stated the metric equivalent is placed in parenthesis, the number of grains being placed in round numbers. The index is full and carefully prepared. The paper is good and the print distinct and clear. The illustrations are well chosen. It is a pleasure to heartily commend the work to the profession.

A Compend of the Principles of Homeopathy as Taught by Hahnemann. By Wm. Boericke, M. D. San Francisco; Boericke & Ruyon.

Hahemann's Organon is the great textbook of the homeopathic school. This work contains 160 pages, setting forth in a clear and concise manner the teachings of homeopathy. The work is well bound.

Principles of Medicine. By Charles S. Mack, M. D. Chicago: The W. T. Keener Company, 1897.

This little work contains 133 pages and shows just what is the cure sought in any given practice of Homeopathy.

Transactions of the American Climatological Association for the Year 1897. Vol. XIII. Philadelphia: Printed for the Association.

This transaction of 229 pages makes a neat volume. It contains many articles of interest and importance. We would specially mention the chapter relating to the influence of climate in various diseases as being exceptionally good, also those on the management of consumption and the treatment of Pulmonary Tuberculosis. This volume is well arranged and splendidly gotten up.

Transactions of the State Medical Society of Wisconsin for the Year 1897. Tracy, Gibbs & Co., Book and Job Printers.

This is, beyond doubt, one of the best volumes of Transactions so far issued by the Medical Society of the State of Wisconsin. The volume is a handsome one, uniform in appearance with preceeding ones, tastefully bound, printed on excellent paper and it is fit to grace the shelves of the most select and fastidious medical library.

Transactions of the Medical Society of the State of California. Session 1897.

Few transactions come to our table that are gotten up in as good shape and contain the quality of reading material as the one before us. Many of the papers are exceptionally fine—the ones pertaining to the treatment of the Morphine habit and neurasthenia. It makes a nice volume and one from which much useful information may be gathered.

LITERARY NOTES.

The Living Age, which has appeared with never-failing regularity for nearly two generations, reflects as faithfully as ever the age in which we live. It is composed of the best articles of the best periodicals, reproduced without abridgment, and is as much superior to any of them as the masterpiece of the Grecian artist was to any of the beautiful women who furnished each some particular charm for the representation of perfect beauty. Each number as it is received is a delight.

The latest issues contain papers by the best-known writers, experts in the subjects treated: "In the House of Commons Half a Century Ago," by Sir C. Gavan Duffy; "Scottish Literature," by Arthur J. Balfour; "A Reminiscence of Tennyson," by William Knight; "The Antiquity of Man," by Sir John Evans; "Contemporaneous Problems: The Colonial Policy of Europe and What that of Spain Should be," from the Spanish of the late Senor A. Canovas del Castillo; "Europe's New Invalid," by John Foreman; "Old Fiction," by Augustine Birrell; "The Superstitions of Shakespeare's Greenwood," by George Morley; "France, Russia, and the England of the Jubilee," by Francis de Pressense; "The New Sayings of Christ," by M. R. James; "A Trappist Monastery in Natal," by Carlyle Smythe; "Ethics and Science," by Julia Wedgwood; "The Works of Robert Louis Stevenson"; "Unpublished Letters of George Canning," etc., etc. In fiction, besides an occasional short story, there is at present running a quaint and suggestive story, entitled "In Nature's Waggish Mood," translated from the German of Paul Heyse for The Living Age.

The present will prove an exceptionally good time to subscribe for this unique magazine, for the publishers announce that to all new subscribers for the year 1898, the weekly numbers of 1897, issued after the receipt of their subscriptions, will be sent free.

Send $6.00 to The Living Age Co., Boston, at once, and receive the benefit of this generous offer.

There is unusual variety of exceptionally interesting material in the November Scribner's. The opening paper, the seventh on the "Conduct of Great Businesses," is by William Allen White, author of the famous article on "What's the Matter with Kansas?" and the delightful stories of "Boyville." It deals with "The Business of a Wheat Farm" and is the first adequate account of the great bonanza farms of the West, whose annual product is such an important element in the rise and fall of wheat prices. Mr. White has studied them not only for the purpose of accurately describing them in terms of acres and bushels and dollars, but with an eye also for their picturesque and varied human aspects.

W. R. Leigh, the artist, who visited the region especially for the magazine, has made a number of graphic and spirited pictures that give a very clear impression of the lively scenes of harvesting time, the wide extent of territory covered, and the great number of machines, men, and horses employed during this busy season.

The Forum for October, 1897.—England, Turkey, and India, Thos. Gibson Bowles, M. P.; Notable Leters from my Political Friends, Senator Justin S. Morrill; Our Need of Merchant Vessels, Hon. Eugene Tyler Chamberlain, U. S. Commissioner of Navigation; The Protective Features of "Section 22," Dr. Joseph Nimmo, Jr.; The Impending Deficiency of Breadstuffs, C. Wood Davis; Statistics *versus* Socialism, Hon. W. T. Harris, U. S. Commissioner of Education; The Heredity of Acquired Characteristics, Prof. Cesare Lombroso.

International Bimetallism:

Bimetallism a Necessity, Edward Tuck; A Single Standard Inevitable, Hon. W. Morton Grinnell; Universities and the Higher Education of Women, Oscar Browning, Lecturer on History at Cambridge University; Naval Warfare: Present and Future, Fred. T. Jane; Paul Verlaine, S. C. de Soissons.

New York: The Forum Publishing Co., 111 Fifth Ave.

Lippincott's Magazine for November, 1897.—The complete novel in the November issue of Lippincott's is "The Price of a Wife," by John Strange Winter (Mrs. Stannard). It is a tale of English domestic life, and of the best which the author of "Bootles' Baby" has written of late years.

"Out of Meeting" is a remarkable paper, half story, half sketch, by the late Thomas Wharton. The inwardness of the Quaker character, and its lingering influence on those who have left the fold to join the world's people, have never been handled with greater insight or more delicate appreciation.

"For His Own Deople" is a tale of Hawaiian sacrifice by Adeline Knapp, who has seen and crossed the terrible crater of

Kilauca, which she describes. William Thomson narrates "A Brazillian Adventure."

The contention of Mr. Lecky's latest book is answered from the standpoint of American democracy, by Fred. Perry Powers, under the heading, "Government by 'Gentlemen.'" Frederick H. Dewey calls attention to certain "Oddities of a Famous Climate," namely that of California.

Francis J. Ziegler writes on "Banquets of the Olden Times," and Calvin Dill Wilson on "Vegetables," which have formed a part of banquets in all times.

A little sermon on "Small Courtesies" is offered by Frances Courtenay Baylor. Eva A. Madden tells of "Novelists as Costumers," and T. C. De Leon shows reason for holding that "The Day of Dialect" is over, or nearly so.

The poetry of the number is by Ella Higginson and Susie M. Best.

The Treatment of Coxalgia.

Jalaquier, according to the Medical Record, is opposed to resection, and thinks that this operation should be reserved for coxalgia complicated with constantly discharging fistulas of abscesses that have resisted punctures followed with injections of camphorated naphthol or of iodoform ether. The operations of the author have been atypical, and he never has felt sure that he has arrived at an entire curettage of the articulation. He agrees with Menard that preliminary injections create a condition favorable to the success of the operation. In the treatment of non-suppurative coxalgias he is not exclusive. In the hospital and where the patient can be closely watched he employs continued extension. When the pains have disappeared at the end of the seventh or eight month he usually applies a plaster dressing and permits walking on crutches, having the patient wear a raised shoe on the healthy side. When the case cannot be attentively watched Dr. Jalaquier applies the plaster at first after resecting under chloroform, if the position is defective. The author agrees with Brun in saying that abscesses do not follow more frequently in children treated by this method than in those treated by continued extension. The author does not share the fears expressed by Kirmisson relative to resecting under chloroform a coxalgia in defective position with or without dislocation, but he emphasizes the statement that he does not employ this method in coxalgias complicated with abscess, When coxalgias are cured or almost cured in a defective position, subtrochanteric osteotomy gives good results. Of one hundred and twenty-two cases treated at the Trousseau Hospital sixty-seven have presented abscesses. Of the one hundred and twenty-two patients eleven died, seven of meningitis, four of pulmonary complications. This mortality rate is not accurate, as many of the children were not watched to the end. Of the one hundred and twenty-two cases forty-six were treated by simple continued extension, and it is curious that in this series we find five deaths from meningitis and four from pulmonary complications. Eighteen were treated by simple immobilization without resetting; they furnished two deaths from meningitis, Forty-one patients submitted to resecting under chloroform. In this series he found no deaths from meningitis or pulmonary complications. This may be due to good fortune, but the author thinks it is because he has never applied forced resection in children having abscesses or when the general condition was bad. As to the comparative value of camphorated napthol and iodoform-ether in the treatment of abscess, he states that eighteen abscesses were cured after sixty-eight injections of camphorated napthol, or an average of three or four punctures for each patient. Twenty-three abscesses were cured after fifty-two injections of iodoform-ether, or about two punctures for each patient, Twenty-two abscesses were cured by the combination of the two agents. Abscesses that proved refractory under camphorated napthol were cured after several injections of iodoform-ether. For these reasons the author prefers iodoform-ether. Some abscesses thus treated become fistulous, but the proportion cannot be exactly given; this occurred only when the skin was ready to break spontaneously. The cure of these fistulas can be obtained if care is taken to avoid secondary infection and resort is had to frequent touchings with a solution of lactic acid, one in three.

The Production of Diphtheria-Antitoxin and the Estimation of its Strength.

Ruete contends that there are two kinds of serum, bactericidal and antitoxic. Diphtheria serum represented the antitoxic form, which was proved by the fact that the growth and virulence of a diphtheria culture were not changed by the addition of serum. For the production of serum there are necessary: 1. Virulent cultures. 2. A proper culture medium. 3. Proper horse-material (animal material in general). Virulent cultures cannot always be obtain-

ed from clinically "intense" cases of diphtheria; those cultures are found to be most virulent which are recognized under the microscope as small rods, only slightly club-shaped. With these colonies raised on a solid culture-medium, the thinnest possible film of bouillon is innoculated. The reaction of the bouillon also is quite important; an acid reaction will prevent the formation of toxins but a neutral or slightly alkaline reaction is favorable to it. Alkalinity may be obtained by the addition of small pieces of marble, or better still by allowing the meat from which the bouillon is to be made to lie for some time until the acid reaction has disappeared. The bouillon-culture is ripe after nineteen to twenty-one days, and is then filtered through asbestos; to the filtrate is added a 0.2 per cent. of trikresol. The strength of the toxin obtained in this manner is tried on the guinea-pig. The experimental animal should succumb within a certain time to a certain dose; autopsy should then reveal the characteristic changes of diphtheria (particularly the reddish-brown discoloration of the supra-renal capsules). As a suitable horse-material he takes strong dray-horses from five to twelve years old, and immunizes these at first with 0.01 cm. of toxin. Four days afterwards, and later at still shorter intervals, the immunizing injections are repeated, and the toxic dose increased, according to the degree of reaction obtained by the dose of the toxin. The toxin-dose borne by the animals becomes finally astonishingly large. It is perfectly independent, however, from the value of the serum which is later obtained. Not all horses bear immunization, some succumb to marasmus, others die rapidly from degeneration of the heart-muscle, still others are afflicted by the formation of multiple abscesses within the area of the injections and then go on to pyemia; only some, therefore, are suitable for obtaining the antitoxic serum. The blood is taken fourteen days after the last injection of a large dose of toxin. The serum, which is obtained sterile, is treated with a one-half per cent. solution of carbolic acid to destroy any germs which may have possibly reached it through the air, by which a slight turbidity (due to the precipitation of albumin) is caused.

A Clinical Study of the Action of the Nucleins in Tuberculosis.

Dr. H. M. King, in the Medical News, states his conclusions as follows:

1. Nuclein is in no sense of the word a specific in tuberculosis, but a perfectly logical remedy which acts in unison with and as a stimulant to the physiological function of animal resistance to the invasion of disease.

2. Indirectly (probably) nuclein acts as a stimulus to constructive metamorphosis, as may be seen by the increase in the number of red blood corpuscles and in the percentage of hemoglobin which follows its repeated injection.

3. The hypodermic employment of nuclein (excepting in the presence of idyosyncracies) is well borne by the great majority of patients, and is not contraindicated in any stage of tuberculosis, although in cases far advanced in the disease success, beyond allaying distressing symptoms, need not be expected.

4. The most satisfactory results in tuberculosis are to be obtained from injections of moderate size made in a single dose once daily.

5. Administration of nuclein per os is of very doubtful benefit, and should be employed only as an adjunct to its hypodermic use, or when circumstances preclude the possibility of the latter method being adopted.

6. Success in nuclein medication in tuberculosis in the great majority of cases can only be expected to follow a continued treatment extending over a considerable period of time.

7. The same care and attention should be bestowed upon the general supportive treatment when nuclein is used as when any other method of treatment is employed.

8. Finally, nuclein medication has given far better clinical results in tuberculosis (by actual statistics) than any other medicinal agent heretofore employed in the treatment of this disease.

A Constant Symptom of Hysteria.

Strozevski, according to the Medical and Surgical Reporter, has observed in connection with other characteristic symptoms of this affection, one which, up to the present time, has not been noticed. It consists of a complete abolition or, at least, a very considerable diminution, of excitation upon certain portions of the body, by the contact of a delicate stimulant, such as, for instance, a piece of paper, or a hair.

If, on a healthy person, these spots are touched in this way, a sort of irritation or tickling is produced, with a more or less agreeable sensation. The experiment causes the person to place his hand upon the spot subject to the excitation. The most readily excited points are: The external auditory canal and mucous membrane of the nasal fossa; then the lower eyelid and the skin of

the forehead. The least excitable spots are: The armpits, the skin on and under the knees, and the sole of the foot. In these last-named places Strozevski excited irritation with gentle movements of the fingers.

In hysterical subjects the above experiment does not cause any sensation, or, in some rare cases, a very slight sensation. Strozevski states that he has studied this symptom in more than fifty cases of hysteria, and has never found it absent, the same being the case in patients who, relieved of their sufferings, were about to leave the hospital. This symptom is equally present in hysteria with depression or with erethism, and in both sexes. It is doubtless of central origin.

The Climacteric Period in Men.

The change is one intimately associated with nutrition. The digestive and assimilative functions begin to slow down between forty and fifty years of age, and the organism, as a whole, undergoes a readjustment. If the digestion remain active while assimilation becomes less perfect, an increase in weight, due to accumulation of fat, takes place. If, on the other hand, digestion is the first to fail, symptoms of dyspepsia, with associated loss of flesh, characterize the period of transition. It is in athletic individuals of active muscular habit that the manifestations are most marked. A time arrives when lessened nutrition renders it impossible to maintain the normal activity of the muscular system. The eliminatory organs perform their function less perfectly, and the processes of dissimilation are hindered. The accumulation of the products of metabolic tissue change in the system reduces the vitality of the subject and indisposes him to the routine amount of exercise. If the subject fail to grasp the significance of these sensations he renders himself liable to various functional disturbances which may culminate in organic disease of the organ or organs most exposed to the strain. Even if he yields to the pressure put upon him, it takes some time for the muscular and vascular systems to tone down to the reduced standard of vitality, and during the period of adjustment he is apt to suffer from a variety of more or less distressing feelings, which not unfrequently determine mental depression. The change is not unlike that holiday spent in active physical exercise. There is the same want of harmony between nutrition and muscular exertion, but, in the waning adult, there is, of course, the factor of increasing arterial rigidity and veneral loss of tone on the part of the tissues. The so-called "critical period" is only critical in so far as the readjustment of the organism to changing conditions is interfered with. Those who have always led a sedentary life are less subject to these disturbances than the more robust and actively disposed. Once the harmony of the functions has been restored the individual resumes his normal existence, though on a lower scale, and he ceases to be liable to the visceral engorgements which are apt to result from "retrogressive irregularity."

Masturbation and Insanity.

Kellogg, in his recent work on mental diseases, refers to this subject, and trenchantly warns the general practitioner against being further deluded by the venerable and ridiculous fallacy of considering the habit responsible for the greater number of nervous and mental disorders. His views, being based upon institution experience, are valuable because of their inherent correctness. The error existing in the whole matter lies in mistaking a symptom for a cause. "Masturbation is a symptom of maniacal status in two-thirds of all cases, not excepting the extremes of youth and senility. Masturbation may be said to be a universal vice existing among animals with instinctive persistency, common among savages, and equally frequent among civilized peoples, appearing in children too young to know what impels them, in single adults of both sexes, and even in married persons, as a matter of choice in the mode of indulgence, and if it caused insanity as often as some claim, the whole race would have long since passed into masturbatic degeneracy of mind. * * * Not one case (of insanity) in a hundred is to be attributed solely to self abuse, and one-half of all the insane, at some time during their insanity, masturbate. The practice is exually prevalent in both sexes, but women are more secretive in the habit. * * * * * * Masturbation does cause insanity in a small percentage of cases, and it is specially injurious as a habit in the very young, or in those of weak nervous organization. In such it may cause physical and mental arrest of development." He shows that the more disastrous effects of the practice are along the lines of moralities, and that it is, physically, less exhausting on the brain centres than sexual excess of the normal sort. Unnatural or solitary indulgence favors spinal disease, while excessive natural sexual gratification leads directly to cortical degeneration of the brain.

Two Hundred and Fifty Cases of Gonorrhea Treated by Large Douches of Permanganate of Potassium.

After an exhaustive study, Dr. Hogge draws the following conclusions: 1. Janet's method is abortive (cure in less than twenty days) only in one-quarter of the cases which are seen less than forty-eight hours after the demonstration of the purulent discharge. The rapid cure may be obtained in some patients presenting themselves for treatment at a latter time (one-sixth of cases treated from two to fifteen days after the appearance of the discharge). 2. The method of large douches of permanganate of potassium and lime assures absolute cure in nearly every case of gonorrhea which is treated from the beginning or which has been submitted to rational treatment until the method is established. Complete cure is usually maintained. 3. This method assures a minimum of complications. Folliculitis or prostatitis may be produced by the method, and, if these have already occurred, the treatment has little influence on them. 4. It is not necessary to douche the posterior urethra systematically, but to attack it only when it becomes diseased. It is not necessary to make more than four or five posterior lavages if the second portion of the morning urine does not become clear rapidly under its action. 5. Weak solutions (1 to 8000 or 1 to 5000) appear best to produce the desired result. This method assures rapid cure and is less liable to produce complications than the method which employ stronger solutions.

Treatment of Placenta Previa.

Dr. Wenning of Cincinnati, presented a paper on this subject at the Toronto Meeting of the American Association of Obstetricians and Gynecologists. He said that he could offer nothing new in the way of suggestions for the treatment of placenta previa, but would refer particularly to the different methods of meeting the two principal indications, namely, to arrest hemorrhage, and to expedite labor. In the first named, each procedure has its peculiar advantages and disadvantages and no special method is applicable for each and every case. He briefly summarized the histories of fifty cases which have been reported by different American practitioners during the past five years, and said it is surprising to note that about three times as many successes have resulted from the much condemned method of *accouchement force* in these cases as compared with other procedures.

The use of the tampon, rupture of the membranes, and version were successively reviewed, and the speaker asserted that in a majority of instances reliance cannot be placed upon one of these alone, as it frequently requires a combination of all three at the proper time to bring the case to a safe conclusion. He laid down the proposition that the tampon is applicable only before dilatation of the os, rupture of the membranes after the onset of labor pains, and version after the os is dilated or dilatable. Each of these procedures is subject to certain modifications, and frequently it is difficult to determine when to abandon one and resort to the other. He insisted that if a tampon is inserted into the vagina a patient must never be left for a moment until delivery is complete.

Rupture of the membranes, as a rule, should be resorted to only when the os is sufficiently dilated to allow the head to press upon the cervix, or the hand to be introduced for the purpose of version. Internal version is the oldest and best known method of delivery in plecenta previa, and is most effective when the os is dilated or dilatable. *Accouchement force* is a dangerous procedure as it is very apt to cause laceration and even gangrene of the cervix; and is never justifiable unless no other means can be resorted to in order to terminate labor and save life.

Resorption of Bacteria in Local Infections.

Halban, in the Universal Medical Journal, states that staphylococcus pyogenes aureus appears in the regional lymphatic glands in a few moments after subcutaneous injection. Size and motility of bacteria do not influence resorptive activity. Halban shows, however, that while all are absorbed with equal rapidity, the bactericidal power of the lymph glands is exerted much more strongly against the pathogenic than the non-pathogenic microbes, This bactericidal power depends upon phagocytosis and the alexins (Buchner) which are present in the lymph and serum, and are elaborated by the leucocytes. As the leucocytes are in quantities in the lymphatic glands their bactericidal action is very strong. Halban shows that a cyclical increase of activity alternates with a period of depression. In his opinion the periods of greater bactericidal activity correspond to periods of lower temperature and well being. On the other hand, chills followed by high fever are signs of sudden microbic invasion occasioned by temporary depression of lymphatic activity.

Hydrozone for Disorders of the Genito-Urinary Tract.

Dr. John Aulde, of Philadelphia, (Medical Times and Register of Philadelphia, Pa., Dec. 5, 1896), states that about eight years ago he was forcibly impressed with the value of Peroxide of Hydrogen in a protracted case of gonorrhœa. The disease had persisted for three months despite the treatment of several attendants, there being a constant discharge and in addition, there was an orchitis present, the left testicle being about as large as a baseball. Treatment consisted of the local use of injections of equal parts of Peroxide of Hydrogen and moderately warm water, used at intervals of four hours, these injecttons being followed by a solution of arsenite of copper containing one milligram (one 65th grain) to the drachm, diluted with an equal quantity of hot water.

In a week the patient was able to return to his home in a distant State, the discharge from the urethra having entirely ceased, and pain and chordee having disappeared.

The author advises the same treatment for non-specific urethritis and gleet, but as Hydrozone is much stronger (2 times) than the Peroxide, and perfectly harmless, he gives it the preference.

In vaginitis and vaginismus this treatment is of especial value. The treatment heretofore recommended by physicians, cousisting of hot vaginal douches, either with or without some alkali, as sodium bicarbonate, followed by the injection of a small quantity of Peroxide of Hydrogen (medicinal) in warm or cold water is superseded by the single application of a hot solution of Hydrozone, one part in eight; the patient should use a fountain syringe which should be hung upon the wall about six feet from the floor; the patient sits upon a suitable vessel, and introduces the ruber tip of the hose well back into the vagina, while the labia are compressed by the disengaged hand; this allows the solution to so distend the vagina as to bring it in contact with all the diseased tissue, The injection should be repeated twice in twenty-four hours.

In uterine diseases, where the solution must be brought into contact with the endometrium, the following treatment is pursued:

The patient is placed in the dorsal position, with the hips well elevated; an ordinary dilator is employed to distend the cervix, so as to admit the nozzle of the syringe and permit the free egress of the injected fluid; (a suitable return flow tube can be used to better advantage, the Fritsche's douche is the best that can be used). The injection is then made, a liberal amount of the hot medicated solution being used.

There is need of caution in chronic cases, that the effervescence which attends the destruction of the unhealthy tissue does not force some of the debris into the Fallopian tubes. This is best avoided by using a large quantity of the solution, and afterwards directing the patient to assume the upright position. The pressure thus brought to bear upon the uterus will cause the complete discharge of all debris.

A preliminary vaginal douche should always be taken, using the medicated solution, as otherwise, harm might ensue by the entrance into the uterus of the vaginal secretions. The author warns against the use of the vaginal douche if the cervix be patulous, as there is an almost certain danger of the infected vaginal debris being forced into the uterine cavity. To avoid this the vagina should be cleansed by the local use of the medicated solution through the speculum.

The author believes Hydrozone to be the best remedy for cystitis occurring either in the male or female. The bladder should be washed out with the solution (one to eight) a small quantity being used at first in chronic cases, owing to the painful muscular contractions following the withdrawal of the solution. The amount can be gradually increased. (A double current hard rubber catheter should always be used for that purpose). In gonorrhœa, gleet, and cystitis, the local treatment is oftentimes aided by the internal administration of hourly doses of calcium sulphide one-tenth of a grain.

Simple Obesity.

Thyroid feeding has lately become one of the most popular methods of treating obesity. Extensive clinical observations have shown that considerable reduction in weight can be secured under this treatment without subjecting patients to the annoyance of a radical change of diet. It is true that unpleasant and even serious symptoms have been observed after the administration of thyroid extracts and these have been attributed to the presence of toxic decomposition products. By the employment of iodothyrine, the active principle of the gland, these unfavorable symptoms can, however, be practically obviated. Dr. Lutaud of Paris, who has used iodothyrine in seventeen cases of simple obesity concludes that "This substance will, without the aid of other treatment, bring about a

reduction of weight without giving rise to serious complications." In five cases there was a rapid improvement and diminution in weight after fifteen day's treatment, no other medicine being employed and in four of these the loss in weight varied from 1 to 6 kilos during this period. In twelve other cases, in which a dry diet and purgatives were also prescribed the average loss in weight was four kilos after fifteen day's treatment. It would seem, therefore, that iodothyrine is a real acquisition to the therapeutics of obesity, and that it is a substance of definite composition, free from by-products and that its dosage can be accurately graduated render it far superior to other thyroid preparations.

Surgery and Facts.

At the American Association of Obstetricians and Gynecologist held at Niagra Falls, Aug. 17, 1897, Dr. Ross of Toronto, presented a paper with this title. He said:

"Our work in this association is confined within the diaphragm, the perineum, and the abdominal walls. We are met together to cultivate and promote a 'knowledge of whatever relates to abdominal surgery, obstetrics, and gynecology.' You will be called upon, during the session, to express your views and to criticise or support the views of others. We do not wish to deal with questions that are already settled but with those that are unsettled. Though the criticism should be friendly, I trust that it will be severe; no rash statements should be allowed to go from this association unchallenged.

"I would like for a few minutes to call your attention to some unsettled questions: First, let us consider the question of peritonitis. Are we able to do more to save the lives of patients suffering from peritonitis in its acute form than we were ten years ago? Are we not but little better off with all our antiseptic and aseptic washes, gauze and tube drains, and purgatives? I am satisfied that surgery can carry us no further when battling with this disease. Something else must come to our assistance. Perhaps it may come through serum-therapy or through our materia medica in the form of an antidote. We know that a poison is formed, that it is rapidly absorbed into the system and rapidly reformed. We know that we may wash it out but that we are unable to prevent its reformation. We know that in some cases we are able to minimize its effect by using the two drainways, namely the drainage tube and the intestinal canal. But in spite of the drainage large numbers of patients die. I intend to try direct venous infusion of salines. The sulphate of magnesia seems to produce a peculiar effect in some of these cases We know that ordinary salt is a preservative of meat and other albuminous materials. It may be that absorption of these salines into the blood may act as a harmless antiseptic and may destroy the ptomain poison present. I am speaking now, of course, of the peritonitis that we are unable to prevent, or peritonitis from contamination from within. When least expected *post-mortem* examination will frequently reveal some hidden source of internal contamination."

The Gonorrheal Inflammations of the Joints, Bursæ, and Tendon Sheaths.

Neisser believes that where the presence of the gonococcus cannot be demonstrated many cases can be recognized as belonging to this class of affections. They may appear at any time ofter infection, but the occurrence of these attacks depends principally upon the time when the cocci invade the mucous membrane and deeper structures, the interval varying with different subjects. He believes that the affection is more frequent in older cases. Gonorrheal inflammations of the synoviæ can occur in consequence of infection in any part of the body, such as gonorrheal inflammations of the conjunctiva, stomatitis, vulvo-vaginitis of the new-born and of older children. Joints which are most exposed to traumata seemed especially predisposed. In males the knee is most frequently attacked, in females the wrist. The danger of ankylosis even after mild attacked, is very great, and in addition there is a decided tendency to spontaneous dislocations, due to secondary contractions of the inflamed synova and periarticular tissue. Effusion is usually not copious, most sero-fibrinous in character, containing a few leucocytes. More rarely the trouble begins with violent pyemic symptoms and purulent effusion which may perforate the capsule. In such cases the cartilaginous surfaces of the bones are rapidly destroyed and death may ensue. Tendo-vaginitis may occur, isolated or in conjunction with joint affections; they are most frequently observed in the hands and feet. When tendo-vaginitis is present alone, the prognosis is much better then when the joints are also affected. When both are combined, gonorrheal infection should always be suspected. Inflammations of the bursæ are more rare. They are most frequent in the neighborhood of the cal-

caneum and are associated with considerable cicatricial induration. The affection is extremely obstinate and painful. Microscopically, the peculiar tissue-proliferations in and around the joint are the most peculiar features; in this all authors agree. Clinically it is important to note that relapses are very frequent as long as the primary infection exists or a new one has been contracted. The most important indications for treatment are compression, rest, and immobilization of the parts, followed by massage, warm baths, and Priessnitz bandages. When considerable effusion with periarticular swelling exists, puncture may be indicated together with intra-articular injections of iodoform. In severe cases opening and drainage are indicated. Too continued immobilization is dangerous owing to the possibility of ankylosis. The local treatment of the primary disease in such cases should consist in mild astrigent injections. In no case should heroic remedies be used, on account of the danger of fresh metastases.

The Localizing Value of Optic Neuritis in Intracranial Tumor.

J. M. Martin, M. D., in the Lancet, refers to the difference of opinion existing in regard to the localizing value of optic neuritis, and gives the result of his analysis of six hundred cases, He has found that the male sex is more than twice as liable as the female to intracranial growths (68.8 % of the cases). In regard to frequency of the different growths, his statistics vary somewhat from those of Starr, who gives for sarcoma 22.6 % against Martin's 28.5 %, for glioma 17.2 % to Martin's 18.5 %, and for tuberculous tumors 36.4 %, while Martin gives only 16.3 %. Sarcoma, therefore, according to Martin, is the most common form of intracranial growth. Martin believes that headache is of no value in determining the position of the tumor, and draws attention to the rather large number of cases of tumor of the motor area and of the callosum in which headache was stated to be absent, to the frequency of occipital headache in cerebellar tumors, and to the frequency of frontal headache in all kinds of tumors. He finds that optic neuritis is constantly present in tumor or the quadrigemina, so that in the absence of optic neuritis we can exclude this region as the seat of the tumor. The cerebellum and parieto-occipital regions come second with optic neuritis in eighty-nine per cent. of the cases, Optic neuritis is found in a comparatively small proportion of cases of tumors of the callosum, pons, or oblongata. Absence of optic neuritis early in the disease is characteristic of tumor of the pons, Martin, from an examination of the reports of fifty-five cases, believes that the seat of lesion is usually on the side on which optic neuritis is more marked, and gives the proportion as seventy-one to twenty-nine. He finds that optic neuritis is most frequently absent when the tumor is tuberculous, and most frequently present when it is a glioma, is cystic, or is a hydatid. In cases in which internal strabismus is noticed the tumor is generally on the same side as the strabismus.

Treatment of Placenta Previa by Champetier De Ribes' Bag.

Dr. G. F. Blacker, in a paper on the use of this appliance, observed that in the more severe cases of hemorrhage from placenta previa, this bag might be employed in place of version, by introducing it into the amniotic cavity after rupture of the membrane. Used in this way, the bag acted both as a tampon in arresting the hemorrage, by pressing the separated position of the placenta firmly against the uterine wall, and also as a dilator of the cervical canal, and a very powerful stimulus to uterine contractions. He has treated five cases of placenta previa in this way, and has collected 17 other cases similiarly treated. He states that in only one case did severe hamorrhage occur after the introduction of the bag; that such hemorrhage might, as a rule, be readily controlled by traction upon the bag, that in none of the cases was any difficulty experience in introducing the bag, nor was any preliminary dilatation of the cervix neceisary; and that the average length of time required for the complete dilatation of the cervix after the introduction of the bag was five hours and ten minutes. Of the mothers all recovered but one that died of sepsis. Of the 22 children, 14 were born alive and 8 dead. Of the 14, 4 subsequently died, giving total mortality of 54.5 per cent.

The advantages claimed for the bag are:

1. Ease and facilty of introduction.
2. The certain arrest of the hemorrage.
3. Any further hemorrhage controllable by traction upon the bag.
4. The bag and not the child's body diliates the cervical canal.
5. The ease of delivery after expulsion of the bag.
6. The fact that the bag is a very powerful stimulus to urine action.
7. The lessened fatal mortality, as compared with the results obtained by version.

Autointoxication in Typhoid Fever.

Modern Medicine of November contains a very instructive editorial with this title.

In the treatment of typhoid fever it should not be forgotten that there are other poisons with which the system has to deal besides those which may be directly attributed to the specific micro-organism characteristic of this disease. The numerous bacteria capable of producing putrefactive processes which are constantly found present in the colon, while more or less active under ordinary conditions, are largely inhibited by the presence of the bile, which, with the gastric juice, possesses most important antiseptic properties. In fever, however, the liver is so overwhelmed with toxic substances that its normal work of bile-making is largely suspended, and, in consequence, fermentation and putrefaction take place much more actively in the colon rhan under ordinary conditions. Hence the amount of ptomains and other toxic substances produced is very greatly increased.

Efforts have been made to obviate the evil results arising from this intestinal putrefaction by the employment of antiseptic drugs of various sorts, such as chloroform, salol, naphthol, subgallate of bismuth, etc, Many acute observers, have maintained that in the use of these antiseptics nothing is really gained, for the reason that the antiseptic, although perhaps exercising to some degree a restraining influence upon the putrefactive process in operation, is itself more or less toxic in character, and thus adds to the toxins with which the body has to deal. If it were possible, in these cases, to make use of insolube antiseptics, and if such agents could be applied directly to the seat of the putrefactive processes, so as to make sure that their operation was thoroughgoing and efficient, great benefit might be derived from their use: but if this cannot be done, it is evident that antiseptic remedies, of whatever sort, cannot be relied upon as a means of controlling internal putrefaction.

When it is remembered that the putrefactive processes of the alimentary canal are almost exclusively confined to the colon, it becomes apparent that the most practical means of suppressing putrefaction and autointoxication in typhoid fever is by maintaining thorough cleanliness of the large intestine. This may be thus accomplished:

1. By avoiding the use of foods which promote putrefactive processes. By this means the limitation of proteid substances to the actual needs of the body is secured. Avoid also, so far as possible, animal products, which, if they are not actually undergoing putrefaction, are more prone to decay because of the presence in the stomach of multitudes of microbes capable of inducing this form of fermentation. This will restrict the dietary of the patient almost wholly to farinaceous preparations, such as well-boiled and strained barley gruel (*ptisan*), so highly recommended by Hippocrates, the ancient Greek physician, and almost universally used in his day.

2. By the employment of food substances which leave behind little or no residue, and which may be easily and perfectly reduced to a soluble state in the stomach. Nut preparations of some sort satisfactorily answer the purpose, particularly malted nuts, almond milk, and similar preparations of nuts.

3. By the use of very finely pulverixed charcoal, which may be advantageous in cases in which there is not an excessive amount of abdominal tenderness. Charcoal absorbs gases and neutralizes the toxins.

4. By lavage of the stomach employed in cases of special disturbance of the stomach, or when there is evidence of decomposition in the stomach, as shown by distension, eructations of gas, or fetid liquids, obstinate vomiting, etc.

5. By a thorough flushing of the colon, which is perhaps the most important process of all, and may be employed once or twice, or even more times, daily, by means of a coloclyster, which may be most conveniently administered to a weak patient while lying in the "right Sims' position," turned well upon the face. This position, as wel as the knee-chest position, secures complete freedom to the whole colon. Water should be used at a temperature of about 90 deg. F., and from one to three quarts should be administered at a time. The patient's sensations will indicate when the colon is completely filled.

Ovarian Surgery.

Dr. Dudley (New York State Medical Association) read a paper on this subject. He thought the pendulum had swung too far, and radical operations were often done when conservative work would give better results. The operation of hysterectomy had become almost perfect. The French were so expert that child-bearing was becoming a very grave question, the government offering pensions to those who raised large families. He thought the government might well pension its surgeons and thus save the child-bearing power of the women. The question was: To what extent can conservative operations be performed with

safety to the patient? A number of years ago he had seen the removal of a healthy ovary followed by the recovery of the patient, and had determined to see if the ovaries when only partly involved could not be operated upon and the unaffected portion saved. He had operated on a woman, removed a portion of one ovary, brought the edges together and sewed them with fine silk. The woman became pregnant in a few months afterward. He had records of sixty-eight patients and all had done welf. Eight of these had since borne children. In all these cases he had not seen a recurrence of any inflammation that could be detected by manual touch. He had never treated the ovaries with the cautery; he punctured the cysts, sometimes scratching the sac until it filled with blood. He thought the cautery desrroyed too much healthy tissue. It was best to save all the tissne possible, but when necessary the operation had included nearly the entire ovary. In operations on the ovary he never used animal sutures, but fine silk. The tubes could be partially removed with good results. Even pus tubes could be saved by removing the portion in which there was pus, splitting the end remaining, sewing the mucous membrane to the peritoneal covering, thus leaving a cup-like end which performed the function of the fimbriated extremity. To this the ovary was attached by a single suture of silk. Some reasons why radical operations should not be performed when avoidable were, retaining the integrity of the home, avoiding nervous symptoms sometimes worse than the original disease, and saving the woman from barrenness.

The Diagnosis of Early Pregnancy.

Dr. Wm. T. Gardner (American Journal of Obstetrics) makes the following observations on the diagnosis of early pregnancy in 75 cases. The value of the sign of "morning sickness" he considers very much overestimated. A typical morning sickness is not infrequently met with in patients who have a uterine displacement or an extensive salpingitis. The breast signs are most constant and most reliable in those pregnant for the first time. The enlargement of the papillæ comes the earliest, and is the most constant and easily recognized. Enlargement and tenderness on pressure are very early and constant signs. The fat breast is large, soft and, even in primiparæ, is more or less pendulous, while the breast of early pregnancy is firm and stands out from the chest wall.

By the end of the third month milk is present in nearly all cases. Pigmentation of the areola never entirely disappears and thus this sign is of very little value after the first pregnancy. The blue discoloration of the vagina he considers of great value in the later stages of gestation. In 75 cases under three months he detected it 15 times.

The velvety feel due to the superficial softening of the vaginal portion of the cervix he found in all of the 75 cases. A similar condition is, however, found in some of the inflammatory conditions of the uterus. In a very large percentage the uterus was found tilted forward. The most important of all signs in the early months, and one, without which he does not make a diagnosis, is the cystic feel of the uterus. Practically a cystic uterus is always a pregnant uterus. There is, however, one exception to this statement—a cystic fibroid will give nearly the same sensation as a pregnant uterus. The variety of the cystic fibroid, its comparatively slow glowth, and the absence of other signs of pregnancy make the diagnosis clear.

The Cutaneous Absorption of Iodine.

Linossier and Lannois state, according to the British Medical Journal that if the healthy skin is painted with tincture of iodine a small quantity of the halogen is found constantly in the urine, and they have experienced as to the conditions under which this absorption takes place. They find that (1) tincture of iodine is absorbed by the skin in very small and inconstant quantities if the painted surface is freely exposed to the air; (2) if the surface is covered hermetically the quantity absorbed is much greater, in one case the amount recovered from the urine being nearly a third of that applied to the skin; (3) the great absorption from the covered surface proves that the iodine enters chiefly by the skin itself, and not by the inhalation of its vapor; (4) the superficial alteration of the epidermis caused by the tincture, unless it has progressed to the destruction of the corneal layer, seems to act rather as an obstacle to absorption than otherwise, since it is during the first few hours after its application that the urine is richest in iodine, while the disorganization of the skin proceeds slowly; (5) iodine is also absorbed from iodized cotton-wool applied to the skin; (6) even under the most favorable conditions this absorption is too inconstant to be used as a general means of administering iodine; (7) iodoform and iodide of ethyl are absorbed by the healthy skin, the latter in such quantity as to be available, if necessary, for introducing iodine into the system.

General Emphysema Followed by Recovery.

Dr. Molin reports in the Brooklyn Medical Journal a case of a robust eight-year old boy suffering from emphysema, extending over the whole body except the palms and soles, caused by being run over by a wagon. Penis and scrotum were so puffed up as to resemble oblong rubber balls, and an attempt to hold the eyelids open with adhesive straps proved unavailing because of the tense state of the skin. The tissues under the scalp were also involved, crackling being distinctly perceived. The skin of the whole body was tense and pale. There were slight contusions on the elbow and chest. Respiration was labored. Palpation disclosed fractures of the sternum and second right rib. Three hours later the emphysema had so increased as materially to interfere with respiration; skin stretched almost to the limit of its elasticity; increasing cyanosis. On incising the chest the effect was instantaneous, as if a tense rubber ball had been pricked, and breathing immediately became deeper and slower. Two rubber drainage-tubes were inserted and left in for five days. Next day a pneumonia jacket was applied, after which the treatment was expectant and symptomatic, the only complication being a mild localized pleurisy and hemoptysis. The pneumothorax had practically disappeared on the sixth day, by expulsion rather than by absorption. The air in the tissues was absorbed so slowly that it could still be detected therein eighteen days afterwards.

Serum Diagnosis of Typhoid Fever.

In the Journal of the American Medical Association Dr. Welch considers the serum diagnosis of typhoid fever and the methods of its application, and in conclusion emphasizes the following points:

1. Experience has demonstrated that the method of serum diagnosis of typhoid fever is of great practical value.

2. The alteration of the blood on which this method is based is a specific effect of infection or intoxication with the typhoid bacillus.

3. The microscopic serum test is to be preferred to the macroscopic methods.

4. Quantative determinations, relating especially to the culture, the time limits, and the dilution of the serum, are of importance, and, at least in doubtful cases, should not be neglected.

5. As the reaction may be delayed or occasionally absent, a negative result of the test does not exclude the diagnosis of typhoid fever. The later in the course of the disease the test is made, and the oftener the examinations are repeated, the less is the probability of the existence of typhoid fever,

6. The persistence of the reaction, sometimes for years after recovery from typhoid fever, is to be borne in mind in interpreting the reaction in febrile conditions. The appearance of the reaction and its increase during the period of observation speaks for fresh typhoid infection.

7. The danger of mistakes from positive reaction in non-typhoid cases can be guarded against in nearly all cases.

8. Provision should be made, especially by the establishment and support of municipal or State laboratories, to render available to practitioners the serum method of diagnosis, as well as other bacteriological procedures of similar practical value.

The Pathogenic Role of the Dust in Living Rooms.

According to Kelsch and Simmounin the floors of our dwellings are as fruitful and dangerous a cause of infection as drinking-water. As a matter of fact, with the exception of typhoid fever and cholera, which are almost always spread by means of water, by far the greater part of other common maladies, such as the eruptive fevers, diphtheria, pneumonia, and above all, tuberculosis, almost always arise from germs preserved in dust, except when direct infection takes place. This view is specially applicable to dwellings where a number of persons gather together, such as public schools, workshops in large towns, hospitals, and barracks. There is always present in these surroundings the danger of a sudden outburst of infectious disease. Infectious epidemics which occur in barracks without having been imported from outside arises from the dust where lie hid germs from former epidemics, or those brought in by the shoes of men who have infected their foot covering from the dirt of stables or latrines. This theory is already a commonplace in military epidemiology. Everywhere the watchfulness of the commanding officer, guided and helped by science and the progressive zeal of the army medical department, pursues the solution of the double problem of the purity of water and the absolute asepsis of the "surfaces" on which live the bodies of men for whom he is responsible. The ideals of the "service de santé" with regard to inhabited places are backed up by sundry measures

which no doubt have not yet arrived at perfection, but which surpass anything hitherto attempted with regard to this matter. Such measures are cleansing of the flooring which by age and long microbial infection is specially dangerous, or even relaying it according to special systems which afford facilities for rendering it aseptic; doing away with, or at least disinfecting thoroughly and osten, the interstices between the planks; or finally making the planks impermeable by means of some substance which will at the same time fill up the holes and disinfect any dirt which may be lodged therein. Such are the means by which military hygiene carries on the strife, and not unsuccessfully, against the origins of disease in barracks. The rendering of planking impermeable has for some years past been carried out in a number of barracks, and many a proof exists as to the minimising of the chances of infection which this process offers. It has passed through the stages of doubt, the tentative stage, and that of careful study, and it is now decided that the best process is coaltarring, a usage today widely spread throughout the army, for this method is the one that best reconciles the demands of hygiene with those of economy. "Coaltarisation" has had unfavourable criticisms here and there; but these are due less to the process itself than to its application by unskilled hands. The experience of the last ten years has served only to fortify the opinion of the military medical staff as to the pathogenic *role* played by the dust which lies hid in the planks. M. Laveran, who has been for many years a military medical officer, has given it as his opinion that "coaltarisation" is not enough and that the only real remedy is to do away with planking altogether.

The Treatment of Hemoptysis.

The Lancet of May 1st, '97, deals with this subject as follows:

The direct effect of drugs in arresting the hemorrhage which occurs in cases of pulmonary tuberculosis is very difficult to estimate with any amount of accuracy. The majority of cases tend to become spontaneously arrested, and any drug which has been given previously is apt to get the credit of stopping the bleeding. Dr. Deguy believes strongly in the value of full doses of gallic acid in this condition, and he gives this drug in doses of from four to fifteen grains in the form of powders, pills, or solutions. In cases where the hemorrhage is very severe he associates the gallic acid with ergotin, thus: Gallic acid 30 grains, ergotin 15 grains; make into twenty pills, of which five or more are to be taken each day. Others, however, do not put much faith in the action of these and other astringents of the same class, and it is difficult to see how such drugs can have any definite action on the bleeding vessels, the walls of which are generally severely diseased. The application of an ice-bag is also another method which is believed by some to be efficacious, while others will have nothing to do with it. It is, again, difficult to see how this method of treatment can be of any direct use except by mechanically assisting to keep the patient quiet. One of the most effective methods of treating an ordinary case of hemoptysis consists in giving a small hypodermic injection of morphine, which generally results in arrest of the hemorrhage, and the patient is at the same time mentally soothed.

Chilly Churches.

Self-denial, says "The Hospital," is one of those virtues which we would say nothing against, and we would even admit that there are many people in the world to whom a little wholesome penance would do no harm. We feel much inclined, however, to doubt the wisdom of those ecclesiastical authorities who, by encouraging a wintry coldness in the house of God, make churchgoing a self-denying ordinance, and early services a form of penance. The chilliness of churches is, indeed, proverbial, and many are the colds which are caught by visitors to the sunny south while investigating the art treasures with which so many of these edifices are made attractive. To kill off a few ungodly globe trotters by pneumonia, the baccillus of which would appear to have a special predilection for Italian churches, may be a perfectly proper proceeding, especially after the verger has pocketed his *lira*, but that priests of the Anglican Church should deal thus with their fair but none too numerous devotees seems hardly worldly wise. At any rate it sets medical men against church-going, which is bad for both the doctors and the churches. The doctors, sadly be it said, have none too good a reputation in regard to forms and ceremonies, and when they in all honesty warn their patients against risks involved in certain religious exercises, they earn for themselves much undeserved obloquy, while undoubtedly the churches suffer both in congregation and in cash by the obvious truth of what the doctors say. Why the vergers, or the grave-diggers, or whatever officials are responsible for the firing-up, cannot be

made to keep our churches warm is a mystery. It does not seem to dawn upon them how many hours it takes to make a building reasonably comfortable. They fire up with great energy when they once set about it, and by the time of evening service the place is stifling, but in the morning the devotions of the sick—nay, even of the healthy—are surrounded by many perils. Strange and pathetic stories could be told on the subject of "churchings" and early services, and even christenings are responsible for many little graves.

Treatment of Circumscribed Pelvic Hemorrhage.

Dr. Rosenwasser in the Am. Jol. of Ob. and Gyn., says:

To avoid the confusion caused by the term "pelvic hematoma," "pelvic hematocele," "intra- and extra-peritoneal hematocele," we should distinguish two clinical varieties of pelvic hemorrhage (1) free hemorrhage being active hemorrhage into the abdominal cavity without tumor formation, and (2) circumscribed hemorrhage, in which active hemorrhage has ceased and the blood has become encysted, forming a distinctly palpable tumor.

The treatment of free hemorrhage should always be by immediate abdominal section. This variety, however, constitutes not more than one-fourth of all cases of pelvic hemorrhage.

The majority of cases seen belong to the variety called "circumscribed." They are cases that have been delayed, or have been unrecognized, or have been accidentally stumbled upon some time after recovery.

Not more than 40 per cent. of all cases of circumscribed hemorrhage require surgical interference. When called to a case of this kind, unless there be a distinct indication for immediate operation, it is best to place the patient at absolute rest in a hospital or under reliable supervision. Cases that continue improving should be left undisturbed until well. Cases that show any signs of growing worse must be operated upon without further delay.

Of thirty-five cases thus treated eighteen have been restored to perfect health without operation. Of the remainder one refused operation, one left hospital before full recovery and fifteen were operated on with four deaths. Three of the deaths were due to far-advanced sepsis previous to operation in cases not recognized by the attending physician.

This rather extensive experience with cases of circumscribed pelvic hemorrhage leads to the following conclusions:

1. That unless they require immediate operation for cause when first seen, they can be submitted to careful supervision in hospital or home without danger.

2. That when thus watched, more than one-half will get well without operations by keeping them at absolute rest for an average period of six to eight weeks.

3. That when they cannot be watched, or refuse to rest, early operation is to be urgently recommended.

4. That operation is necessary only for special indications, of which the most important are sepsis with or without suppuration, recurrent hemorrhage, growth of tumor, non-absorption after reasonable time, and compression of the pelvic viscera (rectum or ureter).

5. Abdominal section is to be preferred to vaginal incision in most cases.

Acute Ascending Paralysis as a Complication of Pasteur's Treatment.

Rendu reports a case in which acute ascending paralysis supervened on Pasteur's treatment. The patient, a lad acting as attendant in the *post-mortem* room, pricked his finger while assisting at a necropsy on a man who had died of hydrophobia. As a prophylactic measure he was treated at the Pasteur Institute, and received sixteen injections between March 22d and April 1st. On the latter date he felt cold, and the following day was ill, with a feeling of heaviness in the legs so that he could hardly walk. There was also some pain in the loins like lumbago. The temperature was only slightly raised, and there was some general hyperesthesia. On April 3d there was marked paresis of the lower limbs, with muscular pains, and almost complete anesthesia of abdomen, lumbar region, and lower limbs; there was also paralysis of the bladder. On April 4th paraplegia was almost absolute, and involuntary defecation occurred about this time. There was no difficulty in respiration or in swallowing. On April 6th some weakness of the upper limbs came on, and the heart became rapid. During this time the injections had been continued, as it was considered important to complete the immunization. On April 7th improvement began; the arms were no longer weak, and there was some return of power and sensation in the legs. Progress was rapid, and within three weeks the patient was quite convalescent. That the case was one of paralytic rabies seems unlikely, as the incubation was too short and

the clinical course unlike it. It seems more likely that an acute ascending myelitis was caused by some toxin in the emulsion of spinal cord which was injected, and that, though usually harmless, the toxin proved virulent in this case owing to the receptive soil produced by the unhealthy surroundings to which a *post-mortem* room attendant is continually exposed.

Danger in Operations for Exophthalmic Goitre.

M. Poncet, (London Lancet), has reopened this important question. Hitherto very contrary opinions have been given on the matter and those, too, from observers most competent to decide the question, such as M. Pean, M. Doyen, and M. Jaboulay. M. Pean considers that it is in nowise an exaggeration to maintain that no surgeon should operate on the thyroid gland in a case of exophthalmic goitre without having very seriously considered the advisability of interfering. Professor Tilleaux considers that only spurious cases of exophthalmic goitre should be operated on—that is to say, those benign tumours of the thyroid gland which cause secondary troubles of Graves's disease sooner or later by compression of the cervical sympathetic. Such cases ought to be considered as ordinary goitres and treated as such. M. Poncet is of opinion that such a degree of caution is exaggerated in cases of simple exophthalmic goitre where the classical triad of symptoms is present from the first. Like M. Pean, or perhaps even more so, he considers that medical treatment should be relied upon for as long as possible—that is to say, until suffocation is imminent; and even then, before interfering with the thyroid body itself, an attempt should be made to give relief by a simple incision through the soft parts in front of the tumour. In all cases of Graves's disease medical treatment should be tried first, and continued even though amelioration be slow, in patients who are in a position to undergo the restrictions imposed by the treatment. In those patients who cannot do this, or who become rapidly cachectic or relapse after a temporary improvement, operation should be advised before the general health becomes too much impaired; but both the patient and his friends should be told that there are risks to be run. If the tumour is of medium size either complete enucleation should be performed or a partial thyroidectomy; if the growth is very large and vascular exothyropexy should be performed, despite the chance of failure. Excision can always be resorted to as a secondary measure when a partial thrombosis of the vessels has been set up by exposure to the air, thus diminishing the operative difficulties and the danger of intoxication. As regards the class of thick, fleshy tumours, or cases of Graves's disease without a goiter or only a very small one and where the vasomotor troubles are very marked, or, finally, where the patient, after having been warned of the danger of operative interference with the thyroid body, has refused to undergo the risk, the question of section of the sympathetic should be raised. The operation of ligature of the thyroid arteries which has been advised by many surgeons of the first class, such as Kocher and Rydigier, M. Poncet refused to discuss, as he said he had not enough experience of the operation to enable him to form any opinion as to its value.

Premonitory Symptoms of Puerperal Fever.

Ferre, according to the British Medical Journal, lays stress on the success of intrauterine treatment for puerperal fever. This success stands in direct ratio to the earliness of intervention. Hence very careful clinical researches have been made in lying-in hospitals in order to detect true prodromata. The true rigor, local pains, and conspicuous pulse and temperature are known to all, and when combined indicate more or less advanced infection. Ferre denies that these symptoms ever come on suddenly, though certain milder types of infection now observed may represent sepsis modified by antiseptic agents. These milder types, however, will assuredly develop into deadly septic infection if neglected. Ferre finds, after long clinical research, that even the severest form is preceded for a day or two by distinct elevation of temperature and pulse, and by insomnia. An evening temperature of about 100 deg. in the axilla, with a fall of about a degree in the morning, without a corresponding drop in a somewhat rapid pulse, is a distinctly suspicious symptom. The rise in the pulse often precedes the rise in the temperature; the observer must therefore make sure that acceleration of the heart's action is accounted for even in a patient who seems otherwise convalescent. Reaction after the fatigue of labour, hemorrhage, and emotions all send up the pulse. Insomnia, Ferre has noted, is often observed in the earlier stages of infection, distinct want of sleep without restlessness is usual for a day or two before bad septic symptoms. The lochia may re-

main free from odour in the premonitory stage of puerperal septicæmia, nor are the discharges always fœtid when the disease is established.

Vaginal Douching After Parturition.

Dr. Peter Horrocks (The Hospital) has done well in drawing the attention of the profession to what one might imagined was an unnecessary proposition, namely, that routine douching of the vagina after parturition is not necessary. It might have been thought that the continued existence of the human race, to say nothing of a few other animals who have managed to continue their species without the aid of the instrument-maker, would have been sufficient to show that, whatever might be said in favour of the douche, at least it was not necessary; but the fact is that, so powerful is dogma, and so difficult is it for practitioners to escape the thraldom of what is "taught in the schools," that it has become necessary to prove and to defend even so elementary a proposition as this.

The public opinion which, in these matters, exercises a certain sway over the general practitioner, just as public opinion always exercises some sort of sway over every one on whom it is brought to bear, is derived from and is fostered by the trained nurse, who, happy being, is able to learn a more or less lucrative profession in three months (!), is apt to look upon the recipe which she has been taught for the conduct of a confinement as the only possible one. The monthly nurse, be it added, is trained in her art and mystery at a lying-in hospital, where all sorts of contrivances have to be kept in operation to counteract the evil consequences which are apt to ensue from the aggregation of a number of cases, and, among other things that she is taught, is the routine douche. Now, we all know what happens when the mistress interferes with the cook, and no doubt the practitioner who, so far as the success of his case goes, is absolutely in the nurse's hands, finds it difficult to interfere with a process like douching, which he knows the modern "monthly" looks upon as an absolutely essential part of her recipe. Dr. Horrocks, who speaks with authority, says that "recently trained midwifery nurses are so firmly impressed with the importance of syringing, that it is with difficulty that they can be prevented from carrying it out." The fact is, that the midwifery nurse is as proud of her syringe, by the use of which she feels herself distinguished from the Gamp, as the new hospital sister is of the particular pattern of her cap-strings, by which she is differentiated from the "pro," and it is no easy matter to persuade her to let syringing alone.

If, however, we bring our teachings to the test of nature and experience, we see that the female economy is perfectly capable of dealing with difficulties born within itself, that thousands of millions of creatures produce their young successfully without aid or interferrence, and that if the douche is necessary, it is only so in consequence of something which is done either by the nurse or accoucher. The routine douche is, in fact, the corollary of the dirty finger, and it may be broadly stated that, if the external genitals of the patient and the hands of the doctor and the nurse are kept in a condition of surgical cleanliness, the douche is quite unnecessary.

Dr. Horrocks points out that in the Guy's Hospital lying-in charity, which is entirely external, the mortality from puerperal fever has been very low, although routine syringing has not been practised. The students, however, are strongly urged never to make a vaginal examination without first washing their hands and placing them in a solution of perchloride of mercury (1 in 1,000). "In 9,097 confinements in one of the lowest and poorest quarters of London, with bad hygienic surroundings, we get a mortality from septicæmia of .06 per cent."; notwithstanding that in many of these cases the child has been born before the arrival of the extern, and the woman has been assisted by the kindly-meant help of a neighbour. Good results then are to be had without the routine douche, even where it is impossible to secure the complete asepticism which can be obtained in hospitals. But Dr. Horrocks goes further than to show that the routine douche is unnecessary; he maintains that it is itself a cause of mischief and that either from ignorance, or from inattention to detail, or from what one may call pure accident, a dirty syringe or water that is not aseptic not infrequently gets used and causes injury. The moral of his remarks is, then, to the effect that douching, useful as it is when it is required, does itself involve a certain risk; that its use is quite unnecessary unless septic matter has been introduced; and that such matter need not be introduced in ordinary cases if the usual precautions of antiseptic midwifery be observed.

The Etiology of Infantile Convulsions.

Sanger, after an extended discussion of the various causes which may produce convulsions, and a review of the theories which have been advanced regarding them, reaches

the following conclusions. (Maryland Medical Journal):

1. Convulsions are most frequent under two years. There are two periods of frequency—under one month and between six months and two years.

2. The nature of the nerve reaction resulting in a convulsion is not understood, but it is probable that instability of nervous tissues at this period of life favors this reaction.

3. Convulsions are frequently observed in adult life, and result from autointoxications and other causes.

4. Convultant substances may be introduced from without or generated within the economy; (a) Substances useful to the economy, if they accumulate, become harmful—for instance, water, carbonic acid, mineral substances, the salts of biliary acids, soluble ferments, toxins not ferments in saliva, alkaloids of secretion in urine; (b) infectious agents may elaborate toxins; (c) organisms constantly present in the economy under certain circumstances may become infectious agents.

5. The instability of all the organs and tissues of the infant economy makes autointoxication common.

6. Convulsions occurring in rachitis and diseases associated with great nutritional disorders; all forms of gastro-intestinal disorders; the acute infectious fevers—are most readily explained on the ground of autointoxication.

7. Convulsions resulting from marked disturbances in the respiratory and circulatory systems, as for instance, asphyxia and hemorrhage, are in all probability toxic.

The reflex origin of convulsions is probably not common. It should, however, be noted that when the so-called convulsive habit is established reflex disturbance may bring on a spasm.

Oil of Wintergreen as an External Application in Rheumatism.

According to M. Lemoine, local applications of oil of wintergreen are valuable in rheumatic fever, acting more rapidly in relieving pain than salicylate of soda and being less liable to produce tinnitus or giddiness, which sometimes follows the use of the latter drug. He soaks a piece of lint in two or three drams of the essential oil, and applies it to the skin; the whole is then completely covered by oiled silk, which well overlaps the lint, and carefully bandaged so as to prevent external evaporation. The application is made over the painful spot if this is conveniently situated; if otherwise the thigh or arm is chosen. In this case the oiled silk should be long enough to encircle the limb, and the absorption of the salicylate of methyl which forms some 40 per cent. of the oil produces almost as good result as if applied to the seat of the pain. This method of treatment answers very well also in some cases of sciatica and, according to M. Siredey, in chronic rheumatic affections, where it may be used for a considerable time without any ill effects, either local or general. Here it acts better when applied directly to the affected joints than when the dressing is placed round the shaft of the bone. The strong smell of the oil is the only inconvenience. The same applicatjon has proved useful in relieving the lightning pains in a case of locomotor ataxia. The use of oil of wintergreen as an external application in chronic and subacute rheumatism is not anything novel, though the particular method of its employment may perhaps be so. Mr. J. D. Staple, however, ussd it in the Stockport Infirmary several years ago as a liniment combined with an equal quantity of olive oil, and reported that in only two out of a hundred cases of chronic rheumatism did it fail to relieve the pain.

Bacteria in the Normal Conjunctiva and the Effect Upon Them of Aseptic and Antiseptic Irrigations---The Staphylococcus Epidermidis Albus a Regular Inhabitant of the Normal Conjunctiva.

Dr. Robert L. Randolph (*in Archives of Ophthalmology*) arrives at the following conclusions: (1) The normal conjunctiva always contains bacteria. Of these the staphylococcus epidermidis albus is found with such frequency that it must be regarded as a regular inhabitant of this situation. This coccus, and probably other bacteria found in this locality, are usually of only slight, if any pathogenic power. It should be remembered, though, that bacteria, ordinarily non-pathogenic, may become harmful under certain favoring conditions, such as the bruising of the tissues by instruments, or the irritation resulting from chemical substances. (2) Neither the irrigation with sterilized water, nor the instillation of a sublimate solution, 1 in 5,000, produces sterility of the conjunctiva, and inasmuch as both measures are futile, and possibly harmful, they may just as well be abandoned. These methods of sterilizing the conjunctiva are the ones usually employed by ophthalmologists, and hence the choice of them for testing this question. The most important essential of a germicide which is

to be used upon the conjunctiva is that it be absolutely free of irritating properties, and, furthermore, it should be demonstrable that this germicide wil destroy the germs most commonly met with iu the normal conjunctiva; it goes without saying that an antiseptic which has these qualities would be indispensable in all operations on the eye. (3) In operating upon the normal conjunctiva, as in cataract operations, the surgeon, in the present state of our disinfecting armamentarium, would do well to consider the subject of antisepsis and asepsis chiefly, if not solely, in connection with the hands, instruments, cocaine, and atropine.

Auto-Intoxicants.

Weber defines auto-intoxication as a poisoning of the system by the products of its tissue-metamorphosis; they may be normal products and do harm by excessive accumulation, or be abnormal, pathological, viz: either not at all, or in minute particles only present in the healthy body. He distinguishes the following varieties:

1. Auto-intoxications by the various disorders of the gastro-intestinal tract, acute and chronic, functional or organic.

2. Auto-intoxications by retention of physiological products and by over-production of physiological and pathological products of the system: Cyanosis, uremia, eclampsia, ammoniemia, acetonuria, coma diabeticum.

3. Auto-intoxications by general anomalies of tissue metamorphosis, and without apparent local disease: Uric-acid diathesis, gout-oxaluria, diabetes. Those are disorders in which intermediary products of assimilation and products of regressive metamorphosis are taken up into the circulation.

Auto-intoxications through great diminution or entire cessation of organic function. These are caused by disease of certain glands, with or without anatomical change, most frequently simple atrophy of the glandular structure. Myxedema by atrophy of the thyroid; cachexia strumipriva, after removal of the thyroid; pancreatic diabetes; acute yellow atrophy of the liver; Addison's disease by tubercular or other destructive disease of the supra-renal capsule. The glands ceasing to functionate, these constitutional disorders are brought about by retention and accumulation of the poisons constantly produced in the system by tissue metamorphosis.

In myxedema we recognize an auto-intoxication of the system in consequence of the absence of the normal thyroid juices. On supplying the patient with thyroid extract we practice specific therapeutics—not homeopathically by any means—because we do not supply the substances which appear to produce the disease, but those of which the disordered system stands in need.

In cases of auto-intoxication by retention or over-production of noxious products, the indications are to prevent the production of poisonous material, or at least its absorption, to destroy poisons in the organism by stimulating hepatic action, for instance, and to help eliminating poisons through the skin, lungs, kidneys, intestines. The physician who knows how and when to order emetics, purgatives, diaphoretics, and diuretics will be most helpful in managing his patient's disorders, be they constitutional or arising from functional deficiencies of the gastro-intestinal tract and the great glands within the abdominal cavity.

Toxic Sweat and Its Vicarious Elimination.

Dr. Walsh, in the London Lancet. Sept. 25, 1897. discusses this subject. He states that the toxic nature of the ordinary sweat of man appears to be well established by the researches of M. Arloing. If confirmed, his observation is likely to throw light upon a number of more or less obscure problems both of etiology and of pathology. If it be true that the skin habitually excretes a toxic substance or substances, then it follows that if the sweat be checked—e. g., by a chill—the toxic material will accumulate in the blood, and the stress of its excretion will be thrown upon other organs. This toxic sudorific material, assuming it to exist. does not appear to damage the skin in normal perspiration, but when the action of the skin is suddenly excited as by a Turkish bath, there sometimes results an immediate and a very definite papular rash which has a strong analogy with the "prickly heat" of the tropics. Perhaps the explanation of this interesting phenomenon may be found in the increased amount of irritant toxic material brought to the skin. That effect might obviously be intensified by the presence of other irritants existing in the blood, such as certain drugs or specific poisons, which are, as it were, superadded to the ordinary toxic principles of sweat.

The general relationship of skin rashes to inflammation of other eliminating organs is fairly well understood. The theory of excretory irritation suggests that a large class of skin rashes are the direct result of the excretion of some irritant from the blood. The irritant may be in the form either of a drug (as arsenic), of a specific micro-organism or its products (exanthems

or anti-toxin), or of other poisons introduced from without or elaborated within the body (ptomaine poisoning or gout). All, or nearly all, internal agents that cause a dermatitis are capable of inflaming other channels of exit of waste from the body, as the lungs, kidneys, or bowels. In this way arsenic may set up dermatitis, gastro-enteritis, and nephritis, and scarlet fever (presumably due to specific microbes) may give rise to a similar train of evils. In other words, a blood borne irritant ageut that is capable of inflaming the skin may also attack vicarious routes of excretion. The time-worn illustration of a knot of persons exposed to some common injurious condition of environment, but who suffer therefrom in different ways, is familiar enough to medical readers. Four men, say, are immersed in a stream; as a result one develops coryza, a second pneumonia, a third nephritis, and a fourth rheumatism. Let it now be supposed that four men suffer in those various ways after exposure to a draught of cool air while sweating freely. Let it also be assumed that sweat normally contains, as M. Arloing asserts, "some energetically poisonous substances, occasioning more or less derangement to all parts of the organism, disturbing the intimate phenomena of nutrition, modifying the composition of the blood substances, the properties of which possess a strong analogy to certain microbic toxins." The sudden suppression of the sweat is likely to force these "normal" toxic materials back upon the blood, and the stress of their elimination must then necessarily fall upon other eliminatory organs, with such possible or probable results as nephritis, pneumonia and other excretory inflammations. But there is more than this. In rheumatism the blood in the first instance is probably always more or less at fault, and there is no evidence to show that in the rheumatic condition the toxic principle of the sweat is not much more complex in composition and variable in effect. If such were the case the result of damming its skin exit, and thus inviting vicarious elimination, would be *pari passu* a much more serious matter—that is to say, there would be infinitely more risk in checking a pathological than a normal sweat. It will be most interesting to learn if M. Arloing has extended his experiments to the relative toxicity of normal and pathological sweats, the latter to include the skin excretions of various fevers, rheumatism, gout, septicæmia, and so on. From the constant association of "chills" and arrested sweating with rheumatism one is tempted to hope that the brilliant researches of M. Arloing may give some clue to the etiology of a disease in which so much remains to be discovered. One is the more hopeful of such an issue upon recalling the striking analogy between the signs and symptoms of many of the septic poisonings and those of rheumatism.

Endless problems are suggested by even a superficial consideration of this captivating theory of the toxicity of sweat. Why, for instance, is exposure to cold so extremely dangerous when a patient has developed the rash of scarlet fever? It is known from clinical experience that the sudden disappearance of the rash is usually a sign of grave import and that chill spells nephritis. May it not be that the action of the skin is checked while actively engaged excreting toxic irritant substances, the elimination of which is then thrown upon the kidneys and other organs? That is to say, the excretory irritation is shifted from the skin to the kidneys. Moreover, it appears not altogether unlikely that a checked skin elimination might be the cause of the subacute rheumatism that often follows scarlet fever. It seems curious in these days of accumulated knowledge that there should be no established scientific explanation of the cause and relations of so everyday a phenomenon as the rash of scarlet fever.

The Ocular Complications of Typhoid Fever.

Bull (Medical Review) states that in typhoid fever various lesions may occur in the eye, not only during the heighth of the disease, but also during convalescence. These lesions may be enumerated as follows, in the order of frequency:

"1. Conjunctivitis of the catarrhal type, with little or no secretions, is a very common occurrence in typhoid as it is in all fevers.

2. Phlyctenular conjunctivitis and keratitis These are not uncommon and occur as clear, transparent vesicles, usually along the corneal margin. There is a great tendency to those affections during convalescence. Those phlyctenulæ do not suppurate, but ulcerate, discharge clear contents and then dry up and leave no trace behind them.

"3. Loss of accommodation and dilatation. These are by no means infrequent symptoms of typhoid fever, are due more to the general asthenic condition than to any lesion in the ciliary body or iris, and occur during the height of the disease as well as during the period of convalescence.

"4. Retinal hemorrhages of various kinds, and more or less profuse, are by no means uncommon occurrences in the height of the disease, being met with in bad cases,

and usually preceded or accompanied by intestinal hemorrhage. Ordinarily these hemorrhages are punctate, linear or flame-shaped, occupying the inner layers of the retina and occurring during the third week. Profuse hemorrhages are uncommon.

"Sometimes a profuse intestinal hemorrhage will cause amaurosis from the great loss of blood, without there being any retinal hemorrhage. This is due to the general peripheral anemia and contraction of the arterial walls caused by the loss of blood, and is of the same nature as the amaurosis met with after profuse epistaxis or menorrhagia. Should these patients recover, the blindness is apt to end in atrophy of the optic nerve.

"5. Paralysis of external muscles is not infrequent during convalescence from typhoid fever or at a later period. According to some authorities these paralyses are due to a chronic nephritis, which is a not infrequent sequel to typhoid. They are said to be nuclear, rapidly recovered from, but tending frequently to relapse. Other authorities regard them as due directly to a neuritis caused by the typhoid poison.

"6. Neuro-retinitis, or retro-bulbar neuritis, a rather rare complication and supposed to be due to a more or less circumscribed meningitis at the base of the brain; it is apt to end in atrophy of the optic nerve. The ophthalmoscopic picture resembles that of retro-bulbar neuritis due to excessive use of alcohol or tobaccco.

"7. Inflammation of the uveal tract such as iritis, cyclitis and choroiditis, both serous and plastic, never purulent, are occasionally met with during the height of the disease. They may be unilateral or bilateral, and of varying intensity."

Neuroses of Gout.

Dr. Mettler, of Chicago, read a paper before the recent meeting of the Mississippi Valley Medical Association. He stated that the presence of uric acid in the system is not the cause of the neurotic manifestations in patients of gouty diathesis. The followers of Haig's chemic theory believe that they are caused by the presence of uric acid in the blood; that the acid affects the vaso-motor system and so alters local nutrition. Others are of the opinion that the neuroses as well as the special symptoms of gout are but an expression of a purely neurotic diathesis—neurotic theory. Still others adopt the view that a nervous constitution, acquired or inherited, is the essential cause, the background as it were, of true gout and its manifestations. These latter may be aggravated or made to assume variable appearances by the associated auto-intoxication, which is but a product of faulty metabolism produced by the original altered innervation, viz: that such gouty manifestations are the result of a trophoneurosis. He stated further that the altered innervation deranges the metabolic function of the tissues, and as a result certain toxic excrementitious substances are overproduced or uneliminated, and finally these, reacting upon an unstable nervous apparatus, produce the various neuroses.

He maintained that the excrementitious products as revealed by the alloxmic substances in the urine consist of the combined uric-acid and xanthin basès. In gout the uric acid is frequently diminished in amount but the increase of the xanthins explains the total increase of the alloxmic bodies. He believes that it is the retention of the xanthins which causes the symptoms of gout. On the other hand, uric acid—which, as is now known, occurs only in the kidneys and when found in the blood has been reabsorbed—enters into combination in the blood to produce urate of soda, which, for some unexplained reason is deposited in the joints.

The symptoms of lithemia and of certain forms of neurasthenia, he believes, are also due to the retention of xanthins, as these diseases have many features in common with gout, chief of which is auto-infection. The uric acid is significant in but one of these, viz., gout, in which it assists in the production of arthritic deposits. Such deposits can hardly be said to be the essential feature of gout, as they are very like certain deposits occurring in cerebro-spinal meningitis, tabes and other organic nervous diseases. The retained toxins, especially the xanthin group, are responsible for the symptom-complex characteristic of gout, lithemia and neurasthenia.

Among the neuroses observed are cepalalgia, epilepsy, chorea, convulsions, vertigo, pain—including neuralgic and psychic pain—hysteria, exophthalmic goiter, asthma, nervous dyspepsia, diabetes, multiple neuritis, facial paralysis, cerebral apoplexy and aphasia. He agrees with Haig and Munchison in assigning lithemia as the cause of many neuroses, but he differs from them in giving the credit to an auto-intoxication of which uric acid is of less etiologic importance than the xanthine bases.

A Nasty Wasteful Habit.

Attention has been called to the dangers attending the sale of "chewing gum" by an inquest which has been recently held at

Lincoln on a child aged between seven and eight years old, who died after eating this substance, which it not unnaturally imagined was a sweetmeat. We would point out, however, that besides such risks as this, the habit of masticating this filthy compound of flavored india-rubber is undoubtedly a cause of much dyspepsia. The constant titillation of the salivary organs kept up by chewing this stuff not only causes a steady drain of saliva, which is most wasteful, but, what is more serious still, in consequence of the frequently repeated stimulation to which these organs are thus exposed, they fail to respond to the normal excitation which ought to rouse them to action when food is taken. A constant dribble of salivary secretion is substituted for the healthy flow which should occur only at meal times. The glands fail to respond to any stimulant less potent than the peppermint, aniseed, or other constituents found in chewing gum; and the more insipid foods, such as bread and other starchy compounds, pass into the stomach unchanged. This is disturbing to digestion at its very commencement, and it is extremely probable that the indigestion for starchy substances, which is so commonly met with at the present day, is largely due to the waste of saliva caused by smoking and by the constant chewing of various substances, which we see going on all around. The chewing of gum is thus not only a nasty habit, but is provocative of ill health. Unfortunately, when "chewing gum" is sold in the form of a sweetmeat it may cause still more serious consequences, being apt to be swallowed by children, who, like their first parents, when they see that it is apparently good for food and pleasant to the eyes, are undeterred by the superscription "not to be eaten."

The Black Man as a Patient.

The fact is generally known, says the Medical and Surgical Reporter, that the colored race of mankind are less susceptible to pain than the highly civilized members of the white community. It is also of interest to recall that highly domesticated animals such as horses are supposed to feel suffering acutely in comparison with animals in the lower scale of life which have never been brought under the influence of domestication.

Again, it is a matter of common observation that some persons bear pain much better than others. In these cases there may be some natural endowment of the nervous system by which the former, when the occasion arises, are enabled to make a display of heroism of a nature which seems nothing less than extraordinary.

Among the black races, however, the normal condition seems to be a remarkable indifference to pain, whenever and however produced, which, to medical men accustomed to practise among white patients, is at first altogether difficult to realize. A colonial contemporary, in discussing this matter, adduces some curious instances of this special feature. Mention, for example, is made of a Makua whose foot had been amputated, and who was found the next day out of bed walking about on the hospital floor using the affected limb for progression just as if nothing was amiss with it. Again, a little girl, whose leg had been amputated, was found sitting by the side of a pool, on the day after the operation, dangling the stump in the muddy water, which she was splashing over it with her hands, and singing to herself while doing so, in perfect happiness and contentment.

The callousness to pain is equally noticed among the women as well as the men in the black races. During some punitive operations in Central Africa, a stockade was shelled, and shells being no respecter of persons, many women and children were killed and injured. Among the latter were several women who, although wounded mortally, continued their occupations of picking up firewood, drawing water, and attending to their physical wants. But within twenty-four hours they were dead.

The experience of those who practice among negroes is to the effect that black patients do not suffer from shock after a severe injury or a large operation. That this should be the case is not surprising in view of their indifference to pain. Upon the whole, then, negroes make excellent patients for the surgeon, often recovering well from wounds to which a white man could not fail to succumb. For the physician, however, the negro is a bad patient, inasmuch as he is peculiarly unable to withstand acute attacks of illness, such as phthisis, dysentery and infectious diseases.

Chorea.

Marfan, in the Edinburgh Medical Journal discusses the pathogenesis of common chorea and its relation to heart disease, taking as his text 76 cases observed by him during four years. He found that 49 had a hereditary history of neuropathic origin, while 11 came of alcoholic parents. The immediate history of these cases pointed to chorea as almost invariably a secondary

disease following some other affection. Foremost among these primary affections was acute articular rheumatism, which accounted for about half the cases, In 43 cases no rheumatic origin could be detected, but in 38 the chorea had been almost immediately preceded by specific febrile diseases, tuberculosis, local suppurations etc., in 3 instances by undetermined diseases with endocarditis and pericarditis. In 19 cases the neurosis appeared to be primary. Marfan believes chorea to be a neurosis produced by various toxins or micro-organisms, but not necessarily an invariable consequence of some primary or secondary infection by pyrogenic organisms. Chorea is a neurosis like hysteria, but not a hysterical disease. Careful distinction must be made between two groups of cardiac disease associated with chorea: (1) Ephemeral disturbances not accompanied by any lesion; (2) endocarditis or pericarditis. Ephemeral cardiac disturbances are due to the fact that the heart takes part in the choreic agitation. There may be hyper-kinesis, arythmia, and irregularity or inequality of the heart beat. The murmurs can be distinguished, as their position of maximum intensity is at the left margin of the heart instead of at the apex; they are mainly meso-systolic, vary with respiration and bodily position, and also vary from day to day as regards character, seat and intensity. Such phenomena are due to true chorea of the heart. True cardiac lesions were found by Marfan in only 14 out of 76 cases. It is to be remembered that all diseases that apart from rheumatism commonly precede chorea are apt to give rise to endocarditis and peri carditis. Symptomatic hemichorea is a separate entity, which must be carefully distinguished from this variety The three great remedies are rest and antipyrine or arsenic.

Limits of Operative Aid in Cancer of the Uterus.

Dr. Rothrock draws the following conclusions regarding the limit of operative aid in the treatment of malignant disease of the uterus:

1. Whenever the uterus is involved, no matter how slightly, with cancer, nothing short of total extirpation of the uterus is justifiable.

2. So long as the disease is confined to the uterus, extirpation by the vaginal method is the proper mode of treatment.

3. Extension beyond the confines of the uterus does not necessarily contraindicate operation for total removal.

4. Whenever the disease has extended beyond the uterus, the abdominal or combined abdominal-vaginal operation is preferable.

5. The contraindication for the operations are extension of the disease to the pelvis through the broad ligaments laterally, involvement of the bladder or ureters anteriorily, or the rectum posteriorily.

6. The possibility of reinoculation at the time of operation should always be borne in mind.

7. Grave palliative operations are justifiable only very exceptionally, and for the immediate relief of very urgent symptoms, if at all.

The Chemical Examination of Human Breast Milk.

Adriance, in Pediatrics, summarize as follows, as the results of the examination of 200 cases. To secure healthy milk, a mother should have: (1) A good constitution; (2) healthy environment; (3) simple, nutritious diet with enough albuminous food; (4) regular exercise in the open air.

(1) Excessive fats or proteids may cause gastro-intestinal symptoms in the nursing infants; (2) excessive fats may be reduced by diminishing the nitrogenous elements in the mother's diet; (3) excessive proteids may be reduced by the proper amount of exercise; (4) excessive proteids are especially apt to cause gastro-intestinal symptoms during the colostrum period; (5) the proteids, beings higher during the colostrum period of premature confinement, presei t danger to the untimely-born iufant; (6) deterioration in human milk is marked by a reduction in the proteids and total solids, or in the proteids alone; (7) this deterioration takes place normally during the later months of lactation, and unless proper additions are made to the infant's diet, is accompanied by a loss of weight or a gain below the normal standard; (8) when this deterioration occurs earlier, it may be the forerunner of the cessation of lactation, or well-directed treatment may improve the condition of the milk.

Facial Nerve Affected by Ear Disease.

Tompka, according to the American Medico-Surgical Bulletin, states that two anatomical modifications favor affection of the facial nerve in ear diseases, viz., dehiscence of the Eustachian tube and the stylo-mastoid artery. The otogenic causes of paresis are:

1. Colds which are limited to the head or ear.

2. Local affections of the ear, such as (a)

reflex paralysis due to outer-ear and auditory-ear, (b) conditions found in middle-ear diseases; serous or mucous catarrhs; acute or chronic purulent inflammation of the tympanum; caries of the temporals, which is one of the most frequent causes, especially when it is accompanied by a complete necrosis of the labyrinth and caries of the wall; scalatinal, diphtheritic, tubercular, typhic or syphilitic middle-ear affections or leucemia.

3. Traumatisms, chemical and thermic.

4. Neoplasms of the auditory canal; polypi, sarcomata, etc.

5. Tumors of the face and brain. Hyperostosis penetrating into the internal canal and involving the facial nerve.

The progress is more favorable in acute than in chronic cases. The persistence in the normal electrical reaction of the nerve indicates a favorable prognosis.

When Shall We Use the Forceps?

The British Medical Journal gives the following rules for the use of the forceps:

1. The indication for the use of forceps rarely or never arises during the first stage of labor, before the membranes have been ruptured.

2. It may be necessary to employ the forceps druing the first stage, when the waters have escaped on account of the increasing exhaustion of the mother or child.

3. It is proper to apply the forceps during the first stage of labor for accidents, whenever they may arise, notably in certain cases of convulsions, placenta previa and prolapse of the cord.

4. In the second stage it is proper to apply the forceps one-half hour after the head ceases to advance, when there is no disproportion between the passage and passenger.

5. When, however, there is a tight fit between the child and the birth canal, the use of the forcepf may be delayed. This delay should rarely exceed two hours after the head ceases to advande.

6. If the head has engaged, and neither advances with the pain nor recedes after the pain, the forceps should be applied promptly.

The Youths' Companion.

There is no paper published in the English language that is more extensively read by young and old than the Youths' Companion. It is the best paper of its kind published,

Early Symptoms of Laryngeal Tuberculosis.

Cheval and Rousseaux, in the Journal of Laryngology, concludes an instructive paper as follows:

1. Laryngeal tuberculosis is primary and secondary—*i. e.*, consecutive to pulmonary phthisis.

2. The premonitory stage, sometimes of many years' duration, takes two forms:

(*a*) The catarrhal form. These are cases of laryngitis which resist treatment, which are seldom generalized, and which are usually localized to one vocal cord. It is an error to suppose that this form may lead to primary laryngeal tuberculosis.

(*b*) The anæmic form. Anæmia of the larynx and pathognomic anæmia of the velum in subjects who are not always anæmic or chlorotic. This variety is complicated with aphonia, intermittent and more or less persistent, with respiratory troubles. Is pulmonary disease always present? Auscultation and percussion cannot as yet answer this question with certainty in many cases.

3. Microscopic examination of the sputa makes early diagnosis possible, but this does not show if the disease is primary or secondary.

4. *Post mortem.*—We have never met with an instance of primary laryngeal tubercle. Lesions take two forms:

(*a*) Granular infiltration. Small granulations of greyish aspect are found in some part of the larynx. The infiltration is often quite superficial, and is rarely more than one millimetre in depth. It is accompanied by congestion and œdema. Later, these granulations undergo caseous degeneration, and a large number of minute erosions result, which, running together, produce ulceration.

(*b*) When of recent development the ulcer is shallow and superficial, the edges are jagged, and the base is grey and fairly smooth. On the other hand, old ulcers are broken up, very irregular, and studded with hollows, actual small cavities, around which the tissues are sclerosed. These ulcers are covered with pus. Other lesions, such as caries, necrosis, and loss of cartilage, are not found at this stage.

5. No relation exists between the degree of the laryngeal and pulmonary lesions; thus we have seen extensive pulmonary excavations on both sides and the larynx free from disease, or both slightly infiltrated.

6. We have not found any preference for particular parts of the larynx. We have found the lesions in all parts, but we wish to determine by an extensive series of ob-

servations if they are not more frequent on the right side. In sleep the right side is generally lower, and consequently more exposed to pulmonary secretions.

7. The side of the larynx most affected does not correspond to that of most diseased lung. Even crossed lesions have been met with.

8. General treatment is imperative, as at all stages.

9. The mountain-air cure is the best treatment.

10. Local surgical treatment gives good results. This should be a thorough curettement, followed by cauterization with lactic acid, *per vias naturales*. In some cases where the laryngoscope does not give precise information as to the position and extent of the lesion (*e. g.*, subglottic infiltration), thyrotomy, followed by curettement, may find its uses.

Surgical Shock and Hemorrhage with Reference to Prevention and Treatment.

Dr. Chase (Am. Ass. of Obstetricians) in discussing this subject presented the following summary:

1. The treatment of shock should be preventive and curative, and to a large degree the indications for the former define the lines of treatment in the latter.

2. The proper exhibition of preventive measures includes a careful study of the functional activity and organic status of all important organs, and such treatment by hygienic, dietetic and therapeutic measures as will elevate the standard of bodily and mental health to a degree in which the maximum power of resistance may be produced and maintained.

3. Special emphasis should be given to lithemic and uremic excretion, and to the condition of the circulatory and nervous systems.

4. Knowledge as to inherited power of resistance to, and recovery from, serious disease and accidents, are of the highest value in determining the course of procedure and in estimating the chances for recovery after capital operations.

5. A supply of facilities and drugs for meeting all emergencies should be in constant readiness, with exact knowledge for the indications, dosage, physiologic and therapeutic effect of special heart tonics and stimulants, including strychnia, digitalis, nitro-glycerin, and the like.

6. Limit the time of an operation to the shortest space compatible with thorough work and proper technique.

7. Save the patient from the shock of fear to the utmost, and in selected cases proceed to operation without informing the patient of your purpose.

8. In shock with hemorrhage supply the volume of venous and arterial loss by direct transfusion of normal salt solution into the patient's veins.

9. Bear in mind the influence position has on circulation under both shock and hemorrhage, especially in anemic conditions of the cerebro-spinal nerve-centers and the heart.

Aseptic Surgical Operations Performed with Cotton Gloves and with Mouth-Protector.

In spite of the employment of asepsis in operations, wounds do not always remain aseptic, but at times are attacked with an infection that may prove fatal. Mikulicz (International Medical Magazine) believes catgut to be comparatively harmless and not often responsible for this acquired infection. Twenty years' experimentation has resulted in the establishment of reliable methods for catgut sterilization. It is the hands of the operator and his assistants that prevent the operation from being completely aseptic. To avoid this difficulty Dr. Mikulicz has introduced into his clinic the wearing of cotton gloves, These are subjected to steam sterilization in the same manner as the dressings. The advantages claimed for these gloves are that they are easily sterilized and that their cost is insignificant. The results are extremely satisfactory. During the three months they have been in use, there has not been at his clinic a single case of infection in wounds which were entirely closed, with the view of obtaining healing by first intention, or in wounds which were not drained. Abscesses were never met with. Before putting on the gloves Mikulicz disinfects his hands as heretofore. If the operation be very bloody he changes the gloves once or twice. In gastrotomies or enterotomies a new pair of gloves is put on when the bowel is opened and another when it is closed. The objection natural proposed, that one would be unable to feel or grasp the tissues or apply the sutures, is not well founded. In a few days one becomes thoroughly accustomed to the gloves, and their use neither handicaps the operator nor prolongs the operation. The author claims no originality for the idea of employing gloves, referring to H. Robb's recommendation of rubber gloves in 1895. The latter have no special indication except to protect the hands in septic operations. Mikulicz considers the pathogenic bacteria in the oral

and nasal cavities another source of infection, to avoid which he has introduced into his clinic the so-called "Mundbinde," which are so constructed as to cover the mouth, nose, and if necessary the beard. These, previously sterilized, are worn by himself and his assistants.

Tuberculous Cystitis.

Professor Gunyon (Amer. Association Journal) emphasizes first of all the immense importance of general therapeutics, which applies to all forms of cystitis. There is not the danger of irritating the bladder in tuberculous cystitis that there is in other forms, hence the diet should be abundant and extremely nourishing. Creosote ranks first in the medicines. He has also found cod-liver oil useful. Local treatment must be very cautiously applied as the bladder is exceeding sensitive. It should be examined as little as possible and irrigation avoided. But the local treatment is extremely important and should be commenced from the first, confining it to very weak solutions.

He found boric acid, etc., injurious in any form, and restricts himself to sublimate and guaiacol. The sublimate is more effective; it is beneficial even in every weak solutions and in merely suspected cases. Four out of thirty-three patients treated with it were completely cured, five much improved, and eight moderately. He begins with a 1-to-5000 solution, raising this to 1-to-3000, and reducing the strength at the slightest evidence of irritation. It must always be borne in mind that the bladder cannot stand even the weakest solution in any form but gradual instillations; thirty to forty drops are enough; fifty the maximum. The general treatment should be continued months, even if all symptoms have long ceased. The surgical treatment was high cystotomy in sixteen cases; one recovered, two improvements, seven deaths, and six negative results. Better results were attained with the perineal drainage. With this in seven operations five were very much improved, one died, and one was not affected. Nine women curetted *per urethram* were all very much benefited with one exception.

Atony of Rectum and Anus.

Dr. William Bodenhamer, in the New York Medical Journal, points out the difference between atony and constipation—the one a disease, the other an effect having many causes. Prolonged constipation is, however, itself a cause of atony by overdistension of the rectum; but rectal distension may itself be caused by atony, and so the vicious circle works. Such primary atony may result from pressure of the fœtal head during labour, from ovarian tumours, displacements of the uterus, and the like; in these the disease is a local one—true atony of the rectum. The most common cause of atony of the rectum is habitual disregard to the calls of nature. It is also frequently caused by the enema habit when hot water is used. Cold water does not seem to have so great a tendency to cause atony. Flushing with large quantities of water is distinctly harmful. The chief symptom of atony is a feeling of fulness and distension which is not properly relieved by defæcation, confirmed by feeling a fæcal mass in the rectum. Sometimes the mucous membrane is smooth, and at other times one finds it thrown into pendant folds.

In the treatment regular habits of evacuation should be enforced, aided for a time, if necessary, by small injections of cold water. In more obstinate cases nux vomica, and injections of powerful astringents and tonics become necessary. Gentle aperients may have to be given as adjuvants. The astringent enemata should be small in quantity, say five or six ounces, and be given after the bowels have acted. They comprise galls, tannic acid, oak bark, rhatany, alum, &c. Hard fæcal masses must, of course, be removed by mechanical means.

Atony of the sphincters occurs occasionally in old age, is often associated with prolapsus ani, and has many causes, both local and constitutional, the removal of which cures the disease.

The Pulmonary Juice and Its Supposed Therapeutic Properties.

Dr. H. Grasset has published a lengthy article on pulmonary tuberculosis and its cure. (The Practitioner). According to him the lung is a gland. Its epithelial cells possess a part granular and swollen, surrounding the nuclei, representing the production of active ferments, etc. These substances have a very great action on the organism. Dr. Grasset does not believe in juice therapeutics. It must be the administration of the organ itself to be effective.

In certain forms of acute bronchitis, before the period of exudation, when the mucous membrane is simply congested and turgid, there is a certain amount of dyspnœa —not mechanical, since the air passages are but slightly narrowed, and not of microbic origin, since it ceases a little later when the micro-organisms become more numerous. It is toxic and of pulmonary origin on ac-

count of the arrest of function of the epithelium.

In bronchitis recovery ordinarily is slow, but the administration of the pulmo-therapeutic mixture brings about a speedy cure, and the secretion becomes almost at once mucous. The author has tried the remedy in phthisis as well as in bronchitis, and reports great benefit. In a case of asthma the effects were very striking. He has not tried it in pneumonia, but he predicts excellent results with it.

A similar mode of treatment has been employed by Grande. He reports benefit from the administration of lung in doses of from a few grammes to half a kilo. a day. The treatment was continued for five months, during which time the patient steadily improved, gaining a stone in weight. Of three guinea-pigs inoculated with tuberculous sputum, two to which lung-powder was administered survived; the other, which was the control animal, died in thirty-three days.

Resection of the Liver.

Auvray, in Annals of Surgery, recommends applying to the liver around the portion to be removed a series of interlocked ligatures of thick silk. To apply the ligatures he makes use of a blunt pedicle needle with a long curve to it. Each individual ligature, after being crossed with its fellow to the right and left, is slowly and steadily tied with such firmness that the liver parenchyma is cut, but the vessels are retained undivided in the loop. When the whole series of ligatures are tied the vessels are to be severed by the knife or scissors. It is of importance while transfixing the liver to use little force, and when any slight obstacle to the passage of the instrument is encountered, to manipulate the needle from side to side, and so gently guide it past the obstruction. Such obstructions are usually large vessels, and any force used might cause them to be perforated. The points of transfixion ought to be about one centimeter apart. In his experiments Auvray has never met with any difficulty, and has never found that the wound in the liver bled in the slightest degree, either primarily or secondarily.

Auvray's experiments were made on living dogs and on recent human cadavers. Seven dogs were operated upon. Of these two died from chloroform as the operation was being finished. The rest recovered rapidly and were killed for examination at periods of from two to thirty-one days after the operation. In all the cases which survived the anesthetization adhesions were found between the wound in the liver and neighboring organs. These adhesions were formed rapidly, since in a dog sacrified forty-eight hours after the operation they existed between the omentum and the anterior surface of the stomach. The wounds in the liver healed rapidly. In an animal which was sacrificed after thirty-one days the portion of liver removed had been regenerated, thus confirming anew the observations of Ponfick and others.

Experiments made on recent human cadavers were equally satisfactory. After the ligatures were applied and the portion of liver supposed to be the seat of tumor was removed, injection of the liver with colored fluid did not show any leak in the wound. To test the firmness and safety of the ligatures traction was made upon them, with the result that the vessels were partially pulled out from the parenchyma behind the ligatures, but these latter did not slip.

Auvray suggests that it might be well in excising portions of the liver to make the wound wedge-shaped so that, hemostasis having been obtained by ligatures, the wound might be made less extensive by means of sutures passed from side to side.

The Treatment of General Suppurative Peritonitis.

Recovery after laparotomy for suppurative peritonitis is rare. A new method of operating, described by Dr. J. M. T. Finney in a recent number of the Johns Hopkins Hospital Bulletin, (Lancet, Oct. 16th, 1897,) which proved successful in five consecutive cases therefore demands attention. He attributes the failure of previous methods to insufficient removal of the infectious exudation. The observations of Pawlowsky show that in purulent peritonitis the lymph channels are choked with bacteria and inflammatory products. The naturally great powers of absorption of the peritoneum are much diminished and it is unable to dispose of the inflammatory products. Dr. Finney operates as follows: A sufficiently long incision io admit of easy access to all parts of the peritoneal cavity is made. The coils of small intestine are quickly withdrawn, beginning with the one that is perforated, All or as much as is necessary of the small intestine is placed outside the abdomen and covered with warm gauze or towels. The peritoneal cavity is then thoroughly and systematically wiped out with large pledgets of gauze wrung out of hot salt solution, paying particular attention to the pelvis. In some cases it may be well to flush with warm salt solution, but this is rarely necessary. Next the small intestine is systemat-

ically examined loop by loop while still outside the abdomen and cleansed by wiping. It is necessary to wipe with considerable force at times in order to remove adherent flakes of partly organized lymph. Success depends on the thoroughness with which this is done. The cleansing process is facilitated if the wiping of the coils is carried on under a constant irrigation of warm salt solution. The intestines are replaced with the damaged or sutured coil the most superficial, in order that it may be the better drained by being packed around with gauze if necessary. The abdominal wound is tightly closed, leaving just room enough between two sutures for a gauze drain. If there are any evidences of distension or pain Paquelin's cautery should be thoroughly applied to the abdomens and the bowels should be moved early by calomel in repeated doses followed by salts and a turpentine enema. To ensure success, the operation should, if possible, be performed within a few hours of perforation. In Dr. Finney's five successful cases the peritonitis was secondary to typhoid perforation in one and to appendicitis in four. He operated unsuccessfully in one case of appendicitis, but the patient was *in extremis* at the time of the operation, which was only undertaken as a forlorn hope,

Vaginal Hysterectomy.

Dr. Byron Robinson read a paper with this title at a recent meeting of the Chicago Gynecological Society. He said:

The superiority of vaginal hysterectomy over abdominal hysterectomy may be noted in the following remarks:

1. Vaginal hysterectomy allows the most perfect known peritoneal drainage.

2. If the vaginal hysterectomy be done anatomically, *i. e.*, the two uterine and two ovarian arteries be isolated and tied, the ureters will not be injured, and the procedure is one of the safest of all capital operations. We ligate the uterine and ovarian arteries with silk and place a clamp on each artery for thirty-six hours. This procedure enables the broad ligament to grow into the upper end of the vagina, and it elongates the vagina.

3. All the ligatures are outside of the peritoneal cavity, or can be removed.

4. There is little shock and rapid and complete convalescence.

5. In pelvic suppuration there is minimum danger of septic infection from soiling the peritonæum.

6. A minimum amount of trauma is inflicted on the intestines and other viscera.

7. It is seldom followed by suture or mural abscesses, or of sinuses, following the use of drainage or infected ligature.

8. In vaginal hysterectomy time is not so important as in abdominal hysterectomy.

9. Vaginal hysterectomy is hard on the operator, but easy on the patient, while abdominal hysterectomy is the reverse.

10. So far as I can see, it does not materially weaken the pelvic floor to perform vaginal hysterectomy. However, in certain individual cases partial prolapse of the vagina occurs.

11. The menopause seems to be easier when the uterus is entirely removed than when only part is removed.

12. Recovery after vaginal hysterectomy is much smoother, less vomiting, pain and thirst than there is after removing the appendages through the abdomen. Thirst is perhaps due to the congestion of the peritonæum after section.

13. Vaginal hernia is less after vaginal hysterectomies than it is after removing the appendages per abdomen.

14. Vaginal hysterectomy is the operation of choice in so-called cases of hystero-epilepsy where every trace of genitals that aid in the menstrual rhythm should be removed with almost entire safety.

15. Vaginal hysterectomy has low mortality, few post-operative complications, and a complete restoration to health in a vast majority of cases.

16. In vaginal hysterectomy the vagina should not be closed nor buried sutures used.

17. The matters to avoid in vaginal hysterectomy are the wounding of the bladder, rectum (any bowel) and ureters. The operation should be learned on the cadaver, or one should assist a skilled gynecologist at say, twenty-five operations, when the technique will be slowly acquired. Vaginal hysterectomy, skilfully performed, is a very safe operation.

What cases should be performed vaginally?

(*a*) All pelvic suppurating cases.

(*b*) All pelvic diseases which do not reach above the pelvic brim.

(*c*) Ectopic pregnancy, if it be low in the pelvis.

Almost all cases possessing tumors, growths or swellings which extend above the pelvic brim, should be attacked per abdomen.

18. Vaginal hysterectomy allows frequently an extra-peritoneal operation. The great mass of intestinal adhesions may remain unbroken and the general peritoneal cavity remain unopened. Removal of septic foci will allow many of the adhesions

and most of the exudates to absorb. The patient will frequently be restored to health and resume the juvenile step.

19. From personal experience I find that the following class of cases are almost perfectly and safely cured alone by vaginal hysterectomy.

(*a*) Non-suppurative diseases, when by repeated inflammatory pelvic attacks, the tubes, ovaries, uterus and many loops of intestines, are held in dense masses of exudates and adhesions.

(*b*) Painful uterus and localized painful points in the annexæ after laparatomy.

(*c*) Abdominal fistulæ following laparatomy for removal of appendages which resist cure by curettement, cauterization, or operation when the ligature cannot be found or removed with safety.

(*d*) Chronic suppurating disease attacking not only the appendages but also the parametric and periuterine tissues demand vaginal hysterectomy for a cure.

The general views in favor of hysterectomy as against removal of the appendages may be noted in the following propositions:

1. The uterus is useless without the appendages.

2. The uterus does not get rid of its inflammation, endometritis and metritis, for from six months to two years after the operation.

3. The uterus, with its inflammed tissue is a source of pain and disease. The uterine walls are almost always diseased with diseased tubes, and should be removed.

4. The uterus is a point where disease cannot only start, but persist.

5. The menopause seems to be less distressing when the uterus is entirely removed than when only part is removed.

6. It is not conservative gynecology to retain diseased organs.

7. It is said that sentiments of the patient are against removal of the uterus. So was the patient's sentiment against removing the tubes and ovaries a few years ago, but "sentiment" can be overcome, and also a gynecologist cannot go by what a patient says, but by experience and pathological conditions.

8. It is, according to my observation, that the neurosis following removal of the uterus, for bilateral diseases of the appendages is smoother than it is after removal of both appendages only.

9. The disease begins in the uterus, and therefore the uterus, as the first offender and the persistent menace, should be removed.

10. The first disease starting in the uterus generally leaves the endometrium crippled with the uterine wall in the same condition, jeopardizing the patient to recurrent attacks.

11. The blood vessels, lymphatics, musculoris and nerves of the uterus once damaged by disease and without appendages is useless, and a menace to the life of the patient.

General Considerations Concerning Auto-Intoxication.

Dr. H. A. Hanbold, of New York, read a paper with this title at the recent meeting of the New York State Medical Association. He said that the theory of auto-intoxication had found but little acceptance in the profession up to recent times. The explanation was to be found in the statement of Albu, of Berlin, that the general practitioner knew but little of physiological chemistry, which was necessary to an understanding of the subject. But recent investigations into the poisons developed spontaneously in the body in connection with general metabolism had given the subject considerable importance. The development of the science of bacteriology had led to the belief that the infection itself constituted only a portion of the etiological factors concerned in disease. In the majority of instances intoxication was secondary to infection, the intoxicants, being the products of infection; but we were also justified in believing that primary intoxication was a frequent cause of disease, and that poisons might develop within the body. Examples were to be found in the saliva of poisonous snakes, animals affected with rabies, and in tetanus. The facts in our possession substantiating the theory of auto-intoxication were still few in number, but they constituted a firm basis for experimentation. Auto-intoxication consisted in a poisoning of the organism with the products of metabolism, existing normally but present in excessive quantity, or with abnormal toxic substances. The latter class was again divided into those undergoing further modification and those existing in the body only in minute quantity. In the gastro-intestinal canal the nutritive constituents underwent certain changes which rendered them capable of assimilation. The end products of disassimilation were for the most part simple compounds, such as water, the inorganic salts, urea, and the urinary salts, but the intermediate products of metabolism were far more complex in nature and difficult of investigation. Under pathological conditions they accumulated in the body and acted as auto-intoxicants. Gautier called these intermediate substances "leucomains," and believed

them to be the cause of many pathological conditions. Disturbances of metabolism resulting in auto-intoxication were not limited to the albuminoids, but were due to the accumulation of intermediary products of the fats and carbohydrates. Under normal conditions it was claimed there always existed small quantities of certain toxic substances formed in connection with the processes of metabolism, but under unnatural conditions these poisonous substances might accumulate in the system in such quantity as to give rise to auto-intoxication. The toxicants circulating in the blood acted as irritants to the organs. If this irritation were transitory, the intoxication would be acute; if the disturbance were frequently repeated, it would result in a chronic auto-intoxication. It was naturally a task of much difficulty to prepare a clearly defined classification of these newly born poisons. Under the head of auto-intoxications von Jaksch, Kobert, Schwalbe, and Bouchard included all the diseases the result of a *contagium vivum*—*i. e.*, the infectious diseases; but, although our present knowledge justified the belief that most of the symptoms of the infectious diseases were produced by an intoxication with the modified products of metabolism, it should be remembered that these modifications were caused by micro-organisms. This was but another way of saying that these intoxicants were the result of matters introduced from without—that they were exogenous poisons.

Dr. Hanbolt considered briefly: (1) The origin or source of auto-intoxication; (2) the conditions governing its development; and (3) its manifestations or symptomatology. Under the first head were mentioned auto-intoxications arising from: (1) The skin—as the phenomena following severe burns; (2) the lungs—as carbonic-acid poisoning; (3) the kidneys—as uræmia and eclampsia; (4) the suprarenal capsules—as Addison's disease; (5) the gastro-intestinal canal (including not only the various constitutional disturbances consequent upon diseases of the stomach and intestines, but acute yellow atrophy of the liver, icterus gravis, cholæmia, and diabetes mellitus); and (6) the thyroid gland—as myxœdema, cachexia strumipriva, and possibly Basedow's disease.

As to the conditions governing the development of auto-intoxication, it should be said that it occurs only when secreting or excreting organs are functionating improperly. Individual predisposition was an important factor in the causation of auto-intoxication, and was almost certainly a neuropathid one. It was evident that if this individual element was not an important etiological factor, auto-intoxications would be much more frequent.

As might be expected, the symptomatology was extremely complex; for, although a single organ might be at fault, the resulting disturbances were usually very general in character. Aside from the very large number of auto-intoxications referable to an organ or definite part of the body, there were a number—such as chlorosis, pernicious anæmata, leukæmia, and the various cachexias—that found expression only in a general disturbance of the metabolism.

The Purification and Sterilization of Drinking Water.

Dr. E. de Kontkowski, of St. Petersburg, at the Twelfth International Medical Congress, presented a paper in which he made the following points. (New York Medical Journal):

1. From the practical point of view, it is important to distinguish between the procedures that have for their object the purification of drinking water and those designed to sterilize it.

2. The purification of water on a large scale, as for the supply of a city, has for its objects to deprive it of injurious substances and to make it clear, colorless, free from disagreeable taste, and sufficiently aerated. Purified water should not contain pathogenic microbes or more than a small number of harmless microbes. Sterilized water should be sterile, that is to say, it must not contain any microbes capable of development.

3. From the hygienic point of view, the purification of drinking water is imperative in all cases in which surface water, liable to contamination, is to be used by human beings.

4. The sterilization of water is to be prescribed only in particular cases and for limited collections of persons, as during an epidemic, in schools, in camps, in hospitals, etc.

5. The sure and steady sterilization of water can not be effected at present, except by such processes as boiling and distillation.

6. Filters, large or small, with or without the use of reagents or electricity, do not give an absolute guarantee of the permanent sterility of purified water.

7. The only process that at present seems applicable to the purification of water on a large scale is slow filtration through sand, with or without oxidation of the organic

matters by means of aeration, electricity, or harmless reagents.

8. The best sources of water are always to be sought for in springs or in subterranean sheets of water. These should be protected by proper regulations.

Some Overlooked Points in Liver-troubles

Dr. Michaux, in Gaillard's Medical Journal, gives the following practical points regarding liver troubles:

1. The occurrence of jaundice is, as a rule, only possible when there is an obstruction of the common bile-duct—when the secreted bile is reabsorbed.

2, There are one or two exceptions, viz.: A rare form of blood-dyscrasia and yellow fever. Thus it appears that jaundice is the result of the absorption of bile, while biliousness is the muddy, dirty discoloration resulting from the non-elimination of the elements which constitute the bile.

3. Biliousness is the result of functional derangement of the liver, while jaundice is the result of obstruction of the common duct (from any of several causes, such as tumor, catarrh, parasite, or gall-stones). In the latter condition the liver is in the normal condition, but bile is prevented from flowing into the intestines.

4. In the treatment of jaundice, it would be wrong to stimulate the liver, for the reason that the organ is not at fault, for the increase in the secretion would tend to distend the tubes and increase pain and pressure. Give belladonna in full doses to dilate the tubes by its action on the unstriped muscular fibres, and bicarbonate of soda to render the bile more fluid, thus facilitating its outflow; the salines to deplete and relieve pressure.

5. In biliousness we stimulate the functions of the liver. For this we use ipecac and euonymus. These in combination with calomel are best.

How is Malaria Communicated?

Laveran believes it hardly possible that infection should take place by means of the air. With reference to water, a large number of observations would tend to show that it was the most likely source, yet these do not point positively enough. Laveran believes that the mosquito is probably the most likely carrier of the infection. He calls to mind that the general anti-malarial measures are such that tend also to get rid of the mosquitoes. Also that fresh infection is common when the mosquitoes are in abundance. Night is especially favorable. Children on account of their tender skins are particularly susceptible, while negroes, with their thick skins, are relatively immune.

Laveran has pointed out many analogous facts referring to contagion being carried by insects such as tuberculosis and cholera by flies, recurrent fever by wasps (wanzan), Texas fever by the ixodes, filaria by mosquitoes, and the nagana disease of South Africa, which is spread by means of the tsetse-fly.

He contends that all attempts to inoculate animals with malaria have failed. He holds it possible that the mother can infect the fetus, but that an infection through the milk is probably not possible.

Non-Ligation of the Umbilical Cord.

Keller, in the British Medical Journal, advocates non-litigation of the cord. He has practised it in more than 2,000 cases, and after careful observation of these cases he summarizes his views as follows:

1. Ligation in man is unnecessary because. (*a*) it is not required at birth of any other animal; (*b*) the imagined necessity to prevent hemorrhage does not exist; (*c*) to tie for cleanliness is superfluous; (*d*) it is unreasonable to consider that such an imperfection as needs ligation exists.

2. Ligation is in many cases injurious, (*a*) because it may justly be considered the cause of secondary hemorrhage; (*b*) by interfering with desiccation, and thus preventing suppuration, it gives rise to ulceration, with not infrequent consequences of erysipelas, fungoid excrescences, etc.; (*c*) it causes inflammation of the funicular vessels by keeping them distended with unnaturally retained blood, hindering their normal obliteration, and laying a foundation for phlebitis, jaundice, pyemia, etc. By preventing a normal escape of blood and thus causing hyperemia and congestion of the portal circulation, it may lay the foundation of numerous infantile affections apparently originating in congestion of these vessels.

3. Certainly in some, and probably in not a few, ligature has been directly fatal: (*a*) numerous fatal cases attributed to ligation have been recorded by the highest authorities; (*b*) it can be seen in the newborn that the ligature maintains the right ventricle in a state of distension, otherwise relieved by bleeding from the hypogastric arteries, and this prevents renewal of the action if the heart has stopped, or hastens its stoppage if it is failing; (*c*) in many instances removal of the ligature has saved life when other remedies had failed.

Puerperal Diphtheria.

Dr. Longyear, of Detroit, presented a paper at the Niagara Falls meeting of the American Association of Obstetricians with this title, the object of which was to bring before the profession the fact that the Klebs-Loeffler bacillus is a potent factor in the etiology of puerperal infection, six cases being reported in proof of the position of the writer. The diphtheritic character of each case was determined not only by clinical evidence, but by bacteriologic examination made by the bacteriologist of the Detroit Board of Health. Five of the cases recovered and one died, the one death being the only case in which antidiphtheritic serum was not used.

The writer recommends bacteriologic examination in all cases of puerperal infection, condemns curetting in all cases where a membranous exudate is present, and recommends the use of antidiphtheritic serum, the intrauterine application of a strong solution of iodine and carbolic acid at the beginning of treatment, drainage of the uterus by a tube, intrauterine irrigation with antiseptic solutions, bi-hourly vaginal injections of hydrogen peroxide, and the usual supportive treatment with quinine and whisky. In mixed cases of Klebs-Loeffler bacillus and streptococcus he would first use the antidiphtheritic serum, and then in twenty-four to forty-eight hours begin the use of the antistreptococcic serum. He believes that the true character of this form of infection has not been heretofore recognized, but that it will be found to be more or less prevalent in all localities in which diphtheria exists if sufficiently critical examinations are made. The physician and midwife are warned to use especial care in such localities, as the post-partum parturient canal furnishes the most favorable soil for the growth of the Klebs-Loeffler bacillus.

The Treatment of Eczema with Picric Acid.

Brousse maintains, says the New York Medical Journal, that the kerato-plastic property of picric acid, which has been successfully used in burns, seems to indicate that its employment is proper in the treatment of eczema, certain forms of which present great analogies to superficial burns. In 1889, he says, Cerasi employed this drug in seven cases of eczema with excellent results. Dr. McLennan, of Glasgow, was also very successful in the treatment of acute eczema and eczema of the face with this drug, which he used in a saturated solution. The author himself has obtained rapid recovery in several cases in which he has employed this treatment. In cases of lichenoid eczema with a thick epidermis the acid was useless, but in acute oozing eczema accompanied by œdema of the skin it was very useful, Under its influence in one case recovery was obtained in two weeks; in another case, in ten days.

Among the advantages of this treatment are the immediate relief produced by the application of the picric acid solution and the disappearance of the pain, heat, and itching; the rapidity with which œdematous tumefaction is effaced; and the absolute painlessness of the dressing, even when it is applied to the bare surface of the derma. According to the opinion of the most competent observers, the extensive application of this does not give rise to any symptoms of poisoning. Not only is it useful in acute eczema, but it is also useful in the acute attacks of chronic eczema which are so frequent in arthritis, particularly if they are accompanied by oozing and ulceration of the skin; it is equally useful in the seborrhoic eczema of infancy. The author states that the results obtained by him with this treatment absolutely confirm those indicated in the publications of Dr. McLennan, M. Gaucher, and M. Leredde. M. Brousse therefore concludes that this treatment is indicated as follows: 1. In acute eczema. 2. In the acute attacks of chronic eczema, particularly if there is a tendency to oozing and ulceration of the skin. 3. In the seborrhoic eczema (impetiginous) of infancy. This treatment, he says, is contraindicated in chronic eczema and generally in all those of eczema which are accompanied by a thickening of the epidermis (lichenoid eczema). Nevertheless, it has the advantage, even in these cases, of allaying the itching.

Toxemia of Pregnancy.

Dr. Wright, of Toronto, (Am. Association of Obstetricians) said that the chief symptoms of this condition were salivation; disorders of digestion, with sometimes a peculiar taste and constipation; general malaise; anemia; nervous disturbances or headache; disorders of vision; irritability; deficient excretion of urine or some of its constituents and albuminuria. He thought any sign of the slightest departure from ordinary health during pregnancy should make us suspect the advent of general toxemia and should receive careful investigation and thorough treatment. If, for instance, there be general malaise, with slight headache, but no albumin in the urine, let us not be deceived, since albuminuria was one of the symptoms of systemic poisoning and

sometimes the last to disappear. Its absence proved absolutely nothing.

He believes that a purely milk diet is good for young babes and calves, but he does not think that it is suitable for adult human beings. Yeo, in his admirable book on Food in Health and Disease, shows clearly that milk is not a suitable food for healthy adults, because it contains an excess of albuminates and fats and that it should be mixed with other foods, especially the carbohydrates. If it be conceded that milk alone is not the best food for healthy adults, it is difficult to conceive how it can be the most suitable in any case of disease.

In connection with his results in the Burnside Hospital, in nine years they have had sixty-five cases of toxemia with albuminuria with two deaths, both from eclampsia. One of these two patients came into the hospital in a dying condition with eclampsia, having received no previous treatment. In the sixty-five cases mentioned there were many cases where the albuminuria and other symptoms were only slight.

The author enumerated the main points in his treatment as follows:

1. A carefully selected mixed diet with plenty of water, plain and mineral, lemonade without sugar and the like.

2. Rest, good hygienic surroundings and proper clothing.

3. The regular and persistent use of purgatives for weeks or months, with a preference for epsom salts.

4. A warm daily bath.

5. The induction of abortion or premature labor in rare cases.

Poultices in Pulmonary Diseases of Children.

Dr. J. M. G. Carter discusses in "Medicine" this subject. He says:

This important but common subject would not need discussion now were it not that the principles of therapeutics, represented by the proper use of poultices, seem to be forgotten at times or their operations rejected. When professional men like Senior and others eminent in the domain of medicine object to the poultice because "it gets cold when allowed to remain on several hours," and thus becomes an exciting cause of further disease or a relapse, as changing from a warm to a cold room might, it is necessary for some one to remind these critics of the purpose for which a poultice is used, and the method of its application. The poultice may be used to relieve pain, or to produce *local* dilatation of the capillaries to relieve some congested area. Now, if these are the objects sought, this is certainly one of the agents which may be used, especially in the pulmonary diseases of children. The *method of use* is as important in the employment of this remedy as in the case of any other. It would be useless in many instances to look for good results from the administration of a dose of quinine once a week or even once a day. It is just as unwise to expect decided effects from a poultice when used in a haphazard or irregular way, or at great intervals. Directions must be definite and results will be positive.

In broncho-pneumonia, or bronchitis it is not always advisable, but is often beneficial. If the patient is poor, the apartment cold, and provision for nursing meagre, it may be better not to undertake the use of this agent. The method and circumstances are everything. Under favorable conditions—that is, under conditions where the physician's directions can be faithfully carried out—the poultice is of great value. When directions cannot be fully conformed to this agent should not be used—a rule which applies to all remedies.

In broncho-pneumonia, when dyspnea is marked; in pneumonia, when pain is great; in pleurisy and bronchitis, accomponied by much distress—a hot poultice surrounding the body will often give very quick and permanent relief; but it must be kept hot by frequent changing or covering with oiled silk and heating with hot-water bottles.

The failure to get good results from the use of poultices indicates a failure to observe therapeutic indications, or negligence in the method of using the remedy. The fault, then, is not with the poultice as a remedial agent, but with the method of use, or with the using it when there is some contraindication. It is no more a panacea for all pulmonary ailments than is Dover's powder. A differential study of cases will help to determine the conditions in which this remedy is of greatest value, and will aid in restoring the poultice to its former deservedly high place in the minds of the profession, and conduce to a proper limitation of its field of usefulness. Exact therapeusis requires that a remedy be prescribed at the proper time, in a definite manner, for a known purpose. Other important local applications which require as careful and scientific use are the mustard, capsicum and spice poultice or plaster; stupes of turpentine, camphor, alcohol; jackets of spongiopiline, cotton, lamb's wool. None of these can be applied in every case indiscriminately.

Nasal Obstruction and the Symptoms of Cardiac Disease.

Lockwood, in the N. Y. Medical Journal, adds to the list of causes for the dyspnœa, the earliest evidence of failing cardiac compensation, the existence of nasal obstruction. He supports his statement theoretically by calling attention to the fact that disease of the heart is most frequently found in rheumatic and gouty patients, and it is these patients that are subject to catarrhal affections of the mucous membranes.—Among the early symptoms of a failing heart are headache, drowsiness, and mental depression, etc. These are symptoms of insufficient oxidation of the blood, and may be due either to the tendency to venous engorgement existing in these conditions whereby the turbinated tissues are enlarged, or to pre-existing obstructions of the nasal cavities.

The doctor mentions eight cases of organic cardiac disease in which the symptoms of failing heart's action were promptly relieved by removing the nasal obstruction, and from these the following conclusions are reached:

1. It is highly probable that patients with cardiac disease are more subject to nasal obstruction than others.

2. Nasal obstruction, occurring in a patient with cardiac disease, may upset the balance of the respiratory compensation, and produce decided symptoms.

3. Unless care be taken these symptoms may be mistaken for those of failing compensation, and may lead to a gloomy prognosis and a faulty treatment.

4. Unless the nasal obstruction be promptly relieved, and the patient allowed a sufficient quantity of good air, the arterial spasm may possibly occur, throwing an increased amount of work on the heart already handicapped, and may become a factor in inducing dilatation. The effect of the poor quality of the blood thus supplied to the endocardium must also be taken into consideration.

5. Nasal examination made during the day may not reveal the actual obstruction, which is most apt to occur at night, when the patient is recumbent and the circulation is in its most sluggish state. To the congestion of the posterior portion of the inferior turbinated bodies thus induced the characteristic nocturnal attacks are to be ascribed, through the medium of asphyxia and arterial contraction. Nasal examination, however, usually reveals some extreme vasomotor irritability of the turbinated bodies.

6. In cases of cardiac disease, including angina and pseudo-angina pectoris, no estimate of the patient's condition can be made and no rational treatment can be inaugurated, without a thorough examination of the patency of the upper respiratory passages.

Neuralgia of the Rectum.

Dr. J. M. Matthews, in the Louisville Medical Monthly, states that he has maintained, that in all such cases some lesion, or at least pathological change exists. It may be that a filament of nerve is exposed by inflammatory action and the symptoms of neuralgia present. The trouble is that the physician is too apt to treat the symptom and not the disease, the effect rather than the cause. After twenty years' experience in the special field of rectal surgery the writer is but confirmed in his opinion that in cases of so-called neuralgia (?) of the rectum can be traced a pathology that will explain all existing symptoms. The object of the paper is to report a single case taken from a number observed, which will illustrate his theory, and that will suggest the proper treatment.

Mrs. B., married, age 50, mother of two children, was referred to me by a medical friend in the country. The patient had suffered for several years with pain in the rectum. It had gradually increased, until life, as she expressed it, "was unbearable." A careful examination of the situation was made with negative results. However, it was determined to chloroform the patient and thoroughly divulse the sphincter muscle—under the idea that a small fissure might exist. This was done with but temporary result. She came back complaining of the same tormenting pain. She was chloroformed the second time, and an application of pure carbolic acid was made to the gut just above the external sphincter. This did her no good. After the elapse of several months the patient returned, saying that the pain was as severe as ever, and that it was limited to one spot, and that this spot must be "cut out." She was chloroformed and the place indicated was freely curetted. The result was the same as the other attempts at cure, perfectly *nil*. I then determined to excise the lower rectum. This was done by the circular operation, three inches of the gut being removed, and edge stitched to the true skin. In the portion resected, about one and one-half inches above the anus, was found a small nodular spot, the one complained of by patient. The theory is that in this little scar tissue a nerve was caught, and hence resulted the symptoms of neuralgia (?). The scar tissue referred to may have resulted from a

small tear of mucous membrane by the passage of hard fæcal matter. Anyway here was a lesion which accounted for the pain, and neuralgia *per se* did not exist.

The Dietetic Treatment of Infantile Diarrhœa.

O. T. Osborne, in the American Gyn. Journal, mentions a number of things we should take into consideration in the feeding of children. We should remember the stomach capacity of infants of different ages, it being a fact that the stomachs of artificially-fed babies are larger than those of breast-fed ones; this must imply some dilatation from over-feeding. The condition of an infant can be best estimated by regular weighing. The nervous system of a child is excitable and its brain large in proportion to its body; so that excitement or peripheral irritation easily disturbs digestion. A child is moreover more sensitive to temperature influences and its digestion disturbed thereby, because its skin surface is relatively great and its thermotaxic center poorly developed. There is very little amylolitic power in either the saliva or the pancreatic secretion for the first year. We must watch the stools, which should be golden yellow on a milk diet but which chænge to brown on the addition of amylaceous or proteid food. Breast-fed children may be affected by nervous excitement of the mother or by drugs that she has taken. As dietetic causes of diarrhœa we may name over-feeding, too frequent feeding, improper foods and impure foods. We occasionally see a child that does well on a starchy food before the end of the first year, but theoretically it should not be given until the second year; after the second year we can make the diet quite varied, giving largely starchy or largely proteid food as the child seems to require. For young infants, it is important to add a small quantity of salt at each feeding.

Diarrhœa is only a symptom, not a disease. It arises chiefly from intestinal indigestion, generally to be referred to the duodenum, or from indigestinal fermentation. In any case the treatment should be a mild cathartic, rest and quiet, and the withdrawal of all food for from twelve to twenty-four hours, giving only sterilized water; or if it is a fermental diarrhœa, barley water. Most fermental diarrhœas are due to bacteria that grow and develop their toxins in decomposed proteids, these decomposition products clinging to the mucous membrane of the intestines. Theoretically we should give bowel antiseptics, but we do not yet know how much antisepsis we can cause in the bowels. Therefore it is best to clean out the decomposing material already there and see that we add nothing further to undergo the same changes. Moreover as this fermentation is chiefly due to proteid decomposition, a change to a starchy diet implies a change of the medium in which the germs have been growing to one in which they do not thrive. It is important that baths should be given and that the napkins should be kept clean. We must not forget, while we are withholding food, to frequently allay thirst by boiled water, in small quantities at a time. When we begin to give food it should be peptonized milk, much diluted and with a litlle lime water.

True cholera infantum is a rare disease; food does not digest and should be entirely withheld, but fluid must be supplied; we wash out the stomach and intestines, use warm baths and warm packs, and quickly-acting medicinal treatment.

We may also have an ileo-colitis—simple, follicular or membranous. The dietetic treatment for the first twenty-four hours is the same as for a fermentative diarrhœa; high injection of plain or medicated water is also excellent, and, as soon is possible, change of air.

Eye Symptoms of Meningitis.

Dr. A. E. Davis in a paper read before the American Medical Association called attention to the eye symptoms of meningitis. Many of the eye symptoms of importance in meningitis are largely motor, which may be observed without the aid of ophthalmoscope, Thirty-eight cases were reported—thirteen simple lepto-meningitis, twelve cerebro-spinal meningitis, thirteen tuberculous. In eight of the thirteen cases of leptomeningitis there were no eye symptoms. The patient with purulent meningitis, in which no eye symptoms were present, showed, post mortem the meninges covered with pus and extensive adhesions between the pia and dura mater. In the cases of cerebro-spinal meningitis eye symptoms were absent in seven. Loss of iris reflex was present in one, dilated and fixed pupils in another, strabismus in a third and in the fourth the pupils were dilated but reacted to light.

No eye symptoms were present in eight of those having tuberculous meningitis; pupils were dilaled in one. There occurred extensive ulcerative keratitis and conjunctivitis in another, and in a third dilated pupils and lagophthalmia. No tuberculous condition of the eye was seen in any case. Whether symptoms are primary or secondary must be decided. The motor and

visual disturbances should also be differentiated. Cerebro-spinal meningitis has, as prominent symptoms paralysis of third, fourth, ophthalmic division of fifth, sixth, and seventh nerves, with nystagmus and ptosis from cortical lesions; choked disc, optic neuritis, perineuritis, plastic and suppurative iritis, conjunctivitis, edema of the lids, hemianopsia as a cortex or tract lesion. In simple or leptomeningitis the eye symptoms are of more importance in determining the diagnosis than in the cerebro-spinal type. The most reliable is optic neuritis. Many cases occur as sequelæ to middle ear suppuration of a chronic character. Metastasis is another frequent cause. The neuritis is always consecutive to a complicating meningitis. In tuberculous meningitis, the eye symptoms are largely the same as in the simple form.

Chloroform Syncope.

Dr. Hill, in the British Medical Journal, summarizes a very valuable paper on this subject as follows:

1. Chloroform produces a primary failure of the circulating mechanism and a secondary failure of the respiratory centre. The respiratory centre fails to act not only because it is damaged by the drug, but because of the anemia of the spinal bulb produced by the fall of arterial tension. This is proved by the fact that the action of the respiratory centre can be renewed by raising the arterial tension. The depth of anesthesia depends, as does the paralysis of the respiratory center, on the primary fall of arterial tension.

2. Chloroform, more than any other known agent, rapidly abolishes the vascular mechanisms which compensate for the hydrostatic effect of gravity.

3. It abolishes these mechanisms by paralyzing the splanchnic vasomotor tone and by weakening the action of the respiratory pump. When these mechanisms are totally abolished the circulation is impossible if the subject be in the feet-down position.

4. Chloroform also produces paralytic dilatation of the heart. It acts directly, like amyl nitrite, on the musculature of the whole vascular system.

5. There are two forms of chloroform syncope: (a) During primary anesthetization. The patient struggles, holds his breath, raises the intrathoracic pressure, congests his venous system, lowers his arterial tension, and finally takes deep inspirations and surcharges his lungs with chloroform. In the first stage the left heart becomes impoverished; in the second stage it is suddenly filled with blood. This is drawn from the lungs and is full of chloroform. The chloroform passes into the coronary arteries and the heart is thrown into paralytic dilatation. Respiration and the pulse either cease simultaneously, or the pulse before respiration. (b) During prolonged anesthetization this arises from gradually giving chloroform to too great an extent. The arterial pressure falls lower and lower, and the respiration ceases because of the anemia of the spinal bulb. The heart is not in this case paralyzed by chloroform, because the drug is taken in gradually by the shallow respirations, and distributed slowly by the feeble circulation.

6. Artificial respiration and the horizontal position, if applied in time, will resuscitate a patient from the second form of syncope.

7. Artificial respiration, established with the patient in the horizontal posture, is also the treatment indicated in the first form of syncope; the heart should be rhythmically compressed by squeezing the thorax. If this does not quickly renew the pulse the patient should be put into the vertical feet-down position; the dilated right heart is thereby completely and easily emptied of blood. Artificial respiration is maintained during this maneuver, and the patient is brought once more into the horizontal posture. By rhythmic compression of the chest an efficient circulation is maintained through the coronary arteries; by first emptying and then filling the heart a fresh supply of blood is brought into that organ. If this does not prove successful on the first trial it can be repeated.

8. Inversion—that is, placing the subject in the feet-up position—or compression of the abdomen will increase the paralytic dilatation of the heart In this kind of syncope both these forms of treatment are worse than useless.

9. In the condition of shock or emotional fear the compensatory mechanism for the effect of gravity is almost abolished, and chloroform may easily be the last straw to completely paralyze the circulation.

10. Vagus inhibition of the heart is of no importance as an agent in the production of chloroform syncope,

11. Ether is in every respect a far safer anesthetic than chloroform. According to Ringer's experiments on the heart ether is fifty times less dangerous than chloroform.

12. With the practical conclusion of the Hyderabad Commission that the chloroform inhaler should be removed during the struggling of the patient, or when the respirations are of irregular depth, he is in absolute agreement, but considers their in-

terpretation of their own experiments and tracings concerning the origin of chloroform syncope to be mistaken.

Histerectomy.

Dr. Lawrence, of Columbus, Ohio, presented a paper with this title at the Mississippi Valley Medical Association, Oct. 7th, 1897. He said:

We must consider: (1) How many would have died without it; (2) how many would have been hopeless invalids without it; (3) how many could have been cured by other means; and (4) the remote conditions or reflex results in those upon whom the operation has been performed. Hysterectomy was ordinarily performed for cancer, pyosalpinx, fibroma and myoma, tuberculosis, and prolapsus. Hysterectomy for cancer was of doubtful utility, but when necessary should be done by the abdominal route. In the case of pus tubes the operation should be limited to those in which the walls of the uterus were the seat of the disease. Simple adhesions were not sufficient grounds for the performance of this operation. Small fibroids involving the lower segment of the uterus only should be treated tentatively. If the small fibroids were in the body of the uterus, they should be treated either by curetting, by removal of the tubes and ovaries, or by hysterectomy, as the case demanded. If small fibroids occurred near the menopause, curettage with electricity was sufficient. For enlarged fibroids after the menopause, hysterectomy was the only thing to be considered. In myoma or tuberculosis, this operation was likewise the only thing to be resorted to. By removing the ovaries and tubes, all of the diseased tissues was not taken away. Any method of operating was to be judged by the safety from complications, by the preservation of a firm pelvic floor, by the facility of operating, and as it afforded the best satisfaction and general results to both patient and operator.

Gunshot Wound of the Spinal Cord.

Dr. Peters, of Toronto, read a paper with this title at the Montreal meeting of the British Medical Association. He said that the causes of death in such cases were shock, hemorrhage, and septic processes, while the factor which most largely determined the rate of mortality was the proximity of the cord lesion to the brain. Cases of this nature in civil practice were very infrequent. Although there had bern cases in which, after complete transverse lesion of the cord at various levels, the individuals had survived for periods varying from one to twenty-six years, yet it might be stated as a rule to which the exceptions were few that patients with such lesions died within a year of the injury. The determining causes of death were inflammation of the bladder and the sequelæ, bedsores and other trophic lesions, dyæmia, amyloid disease, and exhaustion. He recommended medium cystotomy as a routine practice in cases of this injury in male subjects, so as to imitate the short and straight urethra of the female, as the latter seemed to suffer less from bladder symptoms. Dr. Peters referred to the difference between the deep or tendon reflexes which were permanently lost in in complete transverse lesions of the cord, and the superficial or skin reflexes which, as in a case narrated by him, might not only return, but might even become exaggerated. He believed that in the case of the skin reflexes the reflex arc remained intact and the exaggeration was accounted for by the overflow of sensation into the motor regions in the cord, which were relieved of the natural inhibitory influence of the higher centres by the lesion; while in the case of the tendon reflex an influence was normally transmitted to the muscles to maintain their tone which was also interrupted by the lesion—hence the permanent loss.

The Internal Bath in Typhoid Fever.

It is interesting to note the increasing number of physicians coming forward to champion the use of water in typhoid and other febrile conditions. Recently a very interesting discussion occured at the French Therapeutical Society with reference to the treatment of typhoid fever by so-called "internal bath." We quote a portion of the discussion, as follows.

"Dr. Duchenne: It is frequently a difficult matter in the country to treat typhoid fever by Brand's method. In such cases, the ingestion of large quantites of liquids, associated with copious cold water enemata, exerts a very favorable influence on the affections.

"The patient should drink from 3 to 3½ liters of liquid daily, milk or refreshing beverages, but *no broth*, in view of its toxicity.

"This treatment has been employed in Brittany with fifty-four patients suffering from typhoid fever of variable degrees of gravity.

"Deducting slight cases, there were only two deaths among thirty-seven patients.

"Dr. A. Robin: Dr. Duchenne's method of treating typhoid fever confirms the views

which I expressed in 1877 as to the favorable effects of the ingestion of liquids in this disease. The principal effects of this 'drainage of the system' by means of large quantities of liquids is to carry off the toxic wastes and to favor oxidation. The patient should therefore be given as much liquid as he can take.

"Dr. Bolognesi: Juhel-Renoy showed that cold enemata are inactive in typhoid fever, and possess neither diuretic nor antithermic properties, they being of no use except to combat the constipation. With regard to the ingestion of a large quantity of liquid, I think it must be more difficult to make a patient drink against his will than to administer baths. In my opinion, so-called 'internal baths' cannot be compared with cold baths, administered externally, as a method of treating typhoid.

Surgery of the Air Passages in Children.

Dr. Culter, of Chicago, considered (Mississippi Valley Medical Association) the subject one of great importance, because of the high percentage of deaths from diseases of the air passages during childhood, because the respiratory and circulatory functions were being crowded to their vital capacity, and because reflexes in childhood were more prominent and frequent than in adult life. The parents of to-day should be taught that, with our modern methods, technique, and usually favorable prognosis, surgery in children was not the nightmare it formerly was. There was no longer any question of the bad effect of nasal obstruction upon adjacent organs. Any of the causes of nasol obstruction in children would tend to septum deflection in adult life, and if for no other reason the physician was bound to give them possible relief. Catarrhal deafness was almost always due to nasal obstruction- The entire geld for pathological conditions of the nose did not lie in the postnasal space, nor was there any good reason why occlusion of the anterior chambers of the nose should not produce as many reflexes as does hypertrophy of Luschka's tonsil. Foreign bodies in tne nose and throat and the method of their removal were considered.

Musk.

Musk is an animal substance obtained from an abdominal sac of the male of the *Moschus Moschatus*, a small hornless deer inhabiting the higher mauntains of Central Asia ranging from Thibet to China and into Asiatic Russia. The contents of the musk sac are a solid brownish granulated ovoid mass, exceeding strong and tenacious in colour, and varying in size from that of a walnut to that of a hen's egg. There are four varieties of musk, viz., Tonquin, from China, regarded as the best, and which is looked upon as the most *recherche;* Yunnan, from the frontiers of Indo-China; Assam, or Bengalee. and, least valued of all, Kabartin, from Tartary and Slberia, Musk is very expensive, and the high price is the cause of much adulteration not only in the country to which the article is exported but in the place of production as well. The principal adulterants are lead, iron, coagulated blood, leather, stones, and even paper and rags. The adulterant is inserted in the bag, and the opening closed in such a manner as to defy detection. The supposed stimulating effects of musk is dependent entirely upon the small amount of ammonia it contains. Five grams of carbonate of ammonia contains more stimulant than one drachm of musk, the cost of which is about $7.00. This drug is properly regarded as practically worthless as a medicine.

"Typhoid Fever; Its Treatment."

Ranson in the American Practitioner and News, says:

Amidst sweeping censure of many modes of treatment, from blood-letting of a past age to the cold-water cure of the present, thirty years of experience have shown the author the ill-effects of turpentine in enteric fever, and the non-success of heroic dosing with quinine; but it has not shown him the advantages of cold water. He would control temperature by antipyretic dougs, though in using any one of the coal-tar family he would "give it with a stimulus." The old claim of treating 100 consecutive cases of enteric without a death, or with only two deaths, is made to announce the virtues of sulpho-carbolate of soda, which, among others, are "to heal the ulceration and prevent perforation." He thinks that a malarial element may be concerned, and consequently, "as a rule, we begin our treatment with a dose or a few doses of mercury." He admits the virtue of the cold compress, as he thinks it "has a tendency to drive the blood from the bowels and prevent perforation; while, on the other hand, the old plan of hot applications and turpentine stupes encourages the reverse." His remarks on nursing and on the need of disinfecting the dejecta are judicious.

When grating a nutmeg start from the blossom end. It will be found to grate much more readily.

The Relation of Nervous Dyspepsia to General Nervous Disturbances.

Dr. Rosenheim, of Berlin, at the recent International Medical Congress, defined nervous dyspepsia as a sensory neurosis differing from hyperæsthesia in that the disturbances are intimately associated with digestive activity of the stomach and that symptoms are very similar to those of different forms of gastritis. In nervous dyspepsia both motory and sensory functions may be disturbed. There may be an acidity, subacidity, or hyperacidity. Diminution in the amount of the gastric juice, hypermotility and atony are often found. If the functional disturbance is marked and continues a long time, nervous dyspepsia may be easily confounded with other affections, especially with one or other of the forms of gastritis. Nervous dyspepsia, thus defined, is not the frequent affection it is commonly supposed to be, and not all dyspeptic symptoms in a nervous individual point to nervous dyspepsia. In fifty such cases, post mortem examination revealed the fact that more than one-half of the patients had suffered from other diseases of the stomach, principally inflammatory processes, and only in eleven cases were the complex symptoms of nervous dyspepsia found.

Nervous dyspepsia usually brings with it other nervous symptoms, sometimes giving us a complete picture of neurasthenia or (more seldom) of hysteria. That nervous dyspepsia is always a symptom of neurasthenia has been maintained, and it often happens that nervous symptoms depend on stomach disturbances and disappear when the latter are cured. Nevertheless, in nervous dyspepsia the treatment of the stomach symptoms is very useful, especially when combined with the treatment of the general condition and the pathogenesis.

The Prognosis of Scurvy in Early Life.

Dr. Southerland, in the Clinical Journal states that the prognosis in scurvy is extremely good provided that the disease is not too advanced, the hæmorrhages are not very extensive, no special complications exist, and proper treatment is employed. Under these circumstances the results of treatment are amongst the most rapid and striking to be met with in the field of therapeutics. Some authorities hold that the natural course of the disease is towards recovery, and point to the beneficial results which follow from the advent of spring, sunshine and warmth, without the adoption of any special antiscor-butic treatment. While it may be admitted that certain patients show a tendency to recover apart from any direct treatment, even if they suffer from a recurrence of the disease if they continue to live under the same conditions, and each attack leaves them more impaired in health. In those cases the usual duration of an attack, when uninfluenced by treatment is from two to four months. The question naturally arises in connection with these cases as to whether the deprivation of fresh (antiscorbutic) food had been partial or complete, intermittent or constant. If it had been only partial or intermittent, one can easily understand how the form of scurvy induced might be chronic or relapsing, and might never present the acute and grave symptoms of the common variety. In my own experience the natural course of the disease, when there had been complete deprivation of fresh food, has appeared to be towards death, either from the progress of the affection or from some complication.

In the case of an infant the occurrence of extensive hæmorrhage must always be viewed as a serious condition, and when this follows on a period of impaired nutrition and intestinal disturbance, the rallying powers of the patient are often extremely small. An extensive hemorrhage may lead quickly to a fatal termination, or in other cases the child may die more slowly after a period characterised by a falling temperature, great prostration general œdema and increasing cardiac debility. Sometimes cardiac syncope is the cause of death at a comparatively early stage of the affection. Nor is the subsidence of all scorbutic signs to be regarded as an indication that the child is out of danger, for in severe cases the convalescence may be extremely slow, and in others death sometimes ensues, it may be months after the disease was apparently checked.

Temperament in Pulmonary Tuberculosis.

Mitchell, in the N. Y. Medical Journal, says: Temperament seems to play an important part in the acquirement and behavior of phthisis. Persons who are tall and thin and anæmic, and those with red or sandy or light hair, and thin pallid skin and pale mucous membrane, and weak sexual organs, seem to be very liable to tuberculous disease; those having the alkaline temperament far more so than do the shorter, darker hued and more athletic persons, or those of the acid temperament, according to Dr. Gibier.

In this class of cases—the alkaline, it would seem that the apices of the lungs and the subscapular regions are the favorite re-

gions where this disease loves to burrow. It is here that cavties form more readily, and the disease seems more persistent than when in the middle or lower lobes. When the patient who is tall and pale and badly nourished, whose blood is anæmic, acquires phthisis, one or the other apex is very often involved, and he resists treatment to a great degree. In this class of cases also, and when the disease has made any headway, the poisonous principle of the disease, whatever it may be (ptomains or what not), seems to pervade the entire body, and we have in consequence diarrhœa, night sweats, hemorrhages, loss of appetite and an inability to assimilate the little food taken. These patients seem to fall before this disease as readily as grass before the mower's scythe. In this class of cases phthisis is so difficult and persistent that it appears almost malignant.

Not all persons who inhale tubercle bacilli contract the disease. Were it so, few persons would escape, but in order that this bacillus may gain a lodgment in the lung, a lowering of the vitality must be present, and the lung tissue must be weakened from some cause. When such a weak ung or special temperament or adaptability o receive the disease is found, it becomes hus a ready prey to the immigrating nicrobe. In probably the majority of cases n which bacilli are introduced into the lung issue, they are for some reason destroyed t once and do no harm, and this reason is ither an acid temperament or a power to esist disease; but in other cases, in which have said the lung for some reason forms a ongenial habitat, the bacilli grow luxurintly caseation and softening occur, and the nvading army of bacilli gains a victory vhich ends in death, unless checked at the utset by proper treatment.

ondensed Milk: Its Uses and Limitations in Infant Feeding.

Charles Gilmore Kerley in the Medical ews states that condensed milk, as it is enerally used, diluted to one in twelve, ntains five-tenths per cent. of fat, sixnths per cent. of proteids and four per nt. of sugar, the latter chiefly cane sugar; e readily see how little resemblance this ars to mother's milk. Nevertheless many ildren do comparatively well up to three nths upon such a dilution; the sugar is in r quantity, and it is a clinical fact that ildren require a smaller quantity of prod in cow's milk than in mother's milk, ough the former is of course more difficult digest. After the age of three months the demand for larger quantities of fat and proteids is imperative. Of course we exceptionally see infants that thrive for a longer time on such a diet; in fact upon vastly more injudicious feeding; but this does not prove the value of bad feeding, but simply the adaptability of the particular child to unfavorable circumstances. For some reason some young babies do not assimilate the proteid of fresh cow's milk so well as that ts of condensed milk; and they will do well for six or eight weeks on a one to twelve dilution of condensed milk, preferably the unsweetened sort, after which time they can usually be put upon modified milk with a small proportion of proteids.

It is necessary however to use condensed milk among the very poor, the ignorant, and those that are too careless to take the pains to feed their children properly. Being forced then to the use of condensed milk, how shall we use it to the best advantage? We must be guided by our formulæ, both of what the food is and of what it should be. We must supply the deficient fat and proteids; among the well-to-do we add cream in proper proportions; to dispensary patients we give cod-liver oil, from ten drops to a dessert-spoonful three or four times daily. The proteids we supply by the addition of meat broth. One pouud of lean beef (any part of the animal will do) is boiled in one quart of water till the liquid is reduced to one pint; such a broth contains eight-tenths per cent. proteids. For a child three months old we may add one part of condensed milk to twelve parts of the broth; the mixture will contain five-tenths per cent fat, one and four-tenths per cent. proteids and four per cent. sugar. At the sixth month we use one part of the milk to nine parts of the broth. In both cases fat is supplied by cod-liver oil. After the eighth or ninth month the critical period will have been passed, and we may allow barley and oatmeal gruel and other meal mixtures.

Pleasures of a Doctor's Life.

The following are some of the sweets of a doctor's life. If he visits a few of his clients when they are well, it is to get his dinner; if he does not do so, it is because he cares more for the fleece than the flock. If he goes to church regularly it is because he has nothing else to do; if he does not go, it is because he has no respect for the Sabbath or religion. If he speaks to a poor person, he keeps bad company; if he passes them by he is better than other folks. If he has a good carriage, he is extravagant; if he uses a poor one on the score of economy,

he is deficient in necessary pride. If he entertains, it is to soft-soap the people to get their money; if he does not he is afraid of the expense. If his horse is fat, it is because he has nothing to do; if he is lean it is because he is not taken care of. If he drives fast, it is to make people believe somebody is very sick; if he drives slow, he has no interest in the welfare of his patients. If he dresses neatly, he is proud; if he does not, he is wanting in self-respect. If he works on the land, he is fit for nothing but a farmer; if he does not work it is because he is too lazy to do anything. If he talks much, we don't want a doctor to tell everything he knows;" if he does not talk "we like to see a doctor social." If he says anything about politics, he had better let it alone; if he does not say anything about it, "we like to see a man show his colors." If he visits his patients every day, it is to run up a bill; if he does not, it is unjustifiable negligence. If he says anything about religion he is a hypocrite; if he does not he is an infidel. If he uses any of the popular remedies of the day, it is to cater to the whim and prejudices of the people to fill his pockets; if he does not use them, it is from professional selfishness. If he is in the habit of having counsel often, it is because he knows nothing; if he object to it on the ground that he understands his own business, "he is afraid of exposing his ignorance to his superiors.

Mercury in the Early Treatment of Syphilis.

Barthelemy, according to the American Journal of Obstetrics, believes that not only the symptoms of the disease but the disease itself should be treated; that mercury should be prescribed as early as possible after the diagnosis is established, the results of the treatment being better early than late. The intensity of the disease should serve as a guide for the intensity of the treatment. We should take into account the development of the disease and the special constitutional peculiarities of the patient. Although a too energetic or too continuous treatment has some drawbacks, insufficient mercurial treatment allows the patient to become weakened and cachectic. Mercury should be administered for about a month after the disappearance of the symptoms, as the cure may be only apparent. The longer the treatment has continued the longer should the interruptions in its use last. Upon the average mercury is usually used during four years, or eight to nine out of twelve months of the first year, six months each of the second and third years, four months of the fourth year. In regard to the method of administration of the drug, each case should be considered in respect to the severity of the disease, the condition of the patient, etc.

a. When mercury is given by the mouth its absorption is slow and incomplete; its immediate results are satisfactory in slight cases, but the remote results are not. Friction causes the absorption of mercury in unequal amounts, while by injections absorption is more regular and the results better. It is well to vary the methods of administration of the drug and the preparations even in the same patient.

b. While mercury is indispensable in the treatment of syphilis, it is not to be forgotten that it is a poison and that each method of administration may be attended by some disadvantage. Its introduction by the digestive tract has been known to cause intestinal disorders; when given by injection that which has been introduced into the tissues cannot be withdrawn should unfavorable symptoms occur. But injections have cured symptoms which resisted all other procedures, and diminish the chance of relapse. Mercury cannot be given by the mouth where there are gastro-intestinal or hepatic affections, nor can inunctions be applied if the skin is predisposed to erythema. It must be borne in mind that some persons are very susceptible to mercury, and small, tentative doses should be first given. Iodine is of the greatest value in the tertiary, and sometimes in the secondary period, but for many symptoms the iodide of potassium (not sodium) should be associated with mercury. Tonics and strengthening treatment of all kinds should be prescribed. By having the digestive tract in good condition for other medication injections of mercury are especially valuable. Resorting to watering places is of value in grave and relapsing cases because of the change of environment and the more rigid observance of treatment. At thermal springs friction rather than injections should be used.

Specific treatment should be given early in pregnancy either when the father has married before his treatment was completed, when the mother has exhibited suspicious symptoms or when she has previously had miscarriages or still-births.

Treatment by insoluble injections (massive doses) in slightly nerve-supplied, slightly vascular and intramuscular regions, such as the buttocks, is contraindicated when syphilis appears in aged, obese, alcoholic, atheromatous, diabetic, or albuminuric patients, or in those suffering from cardiac or

hepatic disorders, or in the weak and cachectic or those affected with other disorders. In nervous persons and children it is best to use soluble injections, as the cyanide of mercury or the biniodide.

Indications and Use of the Uterine Sound.

Dr. Rosenwasser, in the Atlantic Medical Weekly, says:

a. To ascertain the degree of patency of the cervical canal; to explore the condition of the mucous lining of the cavity, and to measure the depth of the uterus.

Those who discard its use cannot point to a single symptom by which a stenosis can be demonstrated without sound or probe; nor can they help us discover the sensitiveness or hemorrhagic tendency of the mucous lining; nor can they adduce other means by which an accurate knowledge of the size and shrinkage of the womb in sub-involution can be obtained. Furthermore, they cannot assign any reason why the proper use of the sound should be especially calamitous when the similar use of like instruments in organs even more sensitive is conceded to be most appropriate and surgical.

b. To define the position of the womb in the pelvis and the relation of the cervix to the body when these cannot be accurately established by the bimanual.

The sound will clear the doubt in the case of a fleshy woman through whose fat abdominal wall we think we feel the fundus or fail to feel it.

c. To induce early abortion. Experience has taught many of us how easily an unwitting use of the sound can bring on the discharge of an impregnated ovum. Following this cue I have used the sound within a few days after missed menstruation in cases where a possible pregnancy was deemed inadvisable or dangerous. The sound is introduced to the fundus and allowed to rest in the uterus one or two minutes to induce imperceptible contractions. A re-introduction after a few days will usually effect a safe discharge.

d. To assist in replacing some cases of retroversion.

Reposition can be effected in most cases by bimanual manipulation. A patient who is very nervous, or one whose abdominal wall is very thick, cannot thus be managed. The sound is here a valuable aid. It is introduced through the speculum and held in place by the right hand while the speculum is being removed over it with the left. The left index finger is then placed into the posterior vault pushing the fundus upward and forward while the handle of the sound is being depressed. The vaginal finger thus guards against injury and facilitates the replacement.

I would not recommend the sound where of doubtful utility or where an anesthetic would better establish a diagnosis, or where the procedure might be attended with danger. For instance, in differentiating retroflexion from retrouterine tumors, or uterine polypus from inversion; or in efforts to locate insterstitial fibroid in either wall in the presence of a tortuous canal.

Glycosuria in Febrile Conditions.

Poll has investigated the occurrence of glycosuria in febrile conditions where sugar has been taken in the diet. The observations were made in sixteen cases of febrile disease, including pneumonia, typhoid, quinsy, rheumatism, and scarlet fever. The temperature varied from 99.6 deg. to 105 deg. F. Glucose was administered in doses of 100 to 150 grains, and the urine carefully watched afterwards. It was found that glycosuria occurred in fourteen out of the sixteen cases within a short time of the administration, and lasted from two to thirteen hours. It seems that lobar pneumonia is specially liable to show this diet glycosuria. Poll considers that the special proneness to this form of glycosuria in febrile disease is due to the failure of storage of glycogen in the liver, as shown by experiments on animals, and hence the excretion by the kidneys, as sugar from the blood.

Conclusions of a Paper Presented at Moscow, at the International Congress.

Dr. Garochevsky of Samara read a paper on "The Principles of the Struggle against Alcoholism, and the Duty of Special Hospitals for Inebriates."

The following were the conclusions:

1st. Alcohol is a product which, sooner or later, destroys the health of those who use it.

2d. Alcoholism is not a vice, it is a disease, having its clinical physiognomy and anatomical pathology clearly defined.

3d. Alcoholism should be treated in establishments specially designed for the purpose, never in general hospitals or insane asylumns.

4th. Special hospitals for the treatment of inebriates should be the strongest plea in the struggle against alcoholism.

5th. Each province should have at least one hospital especially devoted to the treatment of inebriates.

6th. The organization and management of these hospitals should be altogether under the control of those who have the monopoly of the sale of spirituous liquors, etc. This is exacted by the principles of justice and political economy.

7th. The decrease of drunkenness depends, in any given country, entirely on the government views as to the sale of spirits.

8th. The total abstinence theory is not an illusion, but in the general crusade against alcoholism, it certainly can be useful.

Bacteria and Skin Diseases.

During the last few years our ideas as to the action of parasites have undergone expansion. The influence of the great revolution in pathology brought about by the discoveries of Pasteur, Koch, and their disciples has been felt in the sphere of dermatology as in other departments of medicine, and we have learned to look for the causes of many diseases in the world of the infinitely little which bacteriology has revealed to us. Already lupus, leprosy, carbuncle, glanders, sycosis, furuncle, impetigo contagiosa have been proved to be the result of the mischievous activity or specific activity of specific micro-organisms. It is practically certain that syphilis has a like origin, but the particular microbe responsible for its production is still "wanted" by our scientific police. More than one has been arrested on suspicion, others are being closely shadowed, and there is every hope that the actual criminal will soon be found. Eczema is considered by Unna, who has done much for the recent advance of dermatology, to be of microbic origin. A similar causation is assigned to psoriasis, and by others to alopecia areata, acne, and certain forms of erythema. Quite recently Sabouraud has brought forward evidence which he thinks sufficient to prove that seborrhœa and common baldness are of the bacterial family of diseases. These views are not yet accepted by all dermatologists, but there can be little doubt that as methods of research are perfected the "sphere of influence" of bacteriology in relation to skin diseases will become greatly enlarged. Already it extends far more widely than the brief list of diseases which have been definitely traced to microbic agency would seem to show. In almost every case of skin disease the primary and essential process is at some period of its course complicated, and it may be overshadowed by secondary lesions. To bacteriology we owe the knowledge that these are due to the action of pyococci and streptococci, whose attacks the skin resists in health, but to which it falls an easy prey when diseased. The importance of this knowledge, both in relation to diagnosis and to treatment, can hardly be overestimated.

Phthisis and Child-Bearing.

Dr. Townsend (Boston Medical and Surgical Journal) states:

1. Conception may take place even in advanced pulmonary tuberculosis.

2. The disease is generally held in abeyance during pregnancy, although it may advance or even originate at this time.

3. Labor is short and easy in proportion to the severity of the disease.

4. During the puerperium a rapid advance, leading in some cases to speedy death, occurs; or the disease may originate at this time. In either case the temperature chart suggests puerperal sepsis.

5. Premature labor is more common the more advanced the disease, although pregnancy often goes on to full term even in advanced cases.

6. The average weight of the full-term children and their general condition at birth is not markedly below that of children of healthy mothers, except in the rare instances of congenital tuberculosis.

Intestinal Obstruction Treated by Electricity.

Mingour and Bergonie, in Edinburgh Medical Journal, record the case of a child, aged 5½ years, which was the subject of habitual constipation, and which eventually developed the signs and symptoms of intestinal obstruction with fæcal intoxication. For seven days purges and enemata were administered without result, and the patient became wasted and collapsed, with a weak pulse and a tympanitic abdomen. The face was sunken and the tongue foul; an inguinal hernia which had been present for four years was found normal and not strangulated. The diagnosis of intestinal obstruction by impacted fæces was made. The child's condition being serious and the bowels not having been opened for a week, recourse was had to electricity. A large indifferent electrode was placed on the abdomen and used as the positive pole. Into the rectum about a pint of salt solution was injected, and a rectal sound, 4½ in. long, introduced as the negative pole. The current was gradually raised to 20 milliamperes and after three minutes to 23; one or two

interruptions having been made, a rush of fæcal matter, amounting to about 3 pints, followed, and was succeeded by the immediate recovery of the patient. He has been kept under observation ever since, and has had several further attacks, only one of which necessitated electrical interference. The case is a rare one, and the success of the electrical method after the failure of all other means very noteworthy. The child was injudiciously brought up and fed on an innutritious diet; before its first attack it also indulged immoderately in wine. This latter habit was subsequently broken off, and, indeed, the patient suffered much less from thirst after than before the attack.

Anti-Leprous Serum.

At a recent meeting of the Academy of Medicine, Paris, M. Hallopeau read a communication upon the treatment of leprosy by hypodermic injections of the serum prepared after the manner of Dr. Carrasquilla. (Lancet, Oct. 9, 1897,) M. Hallopeau's conclusions are not altogether favourable. He points out that the therapeutics of leprosy are in need of much further elucidation, for it is well known that this disease advances by successive exacerbations which are followed by periods often lasting for a considerable time of spontaneous amelioration and retrogression of the disease so marked as to simulate cure. If any drug is given during the time of exacerbation the cessation of acute symptoms which follows is very likely to be attributed to this drug, although the same results would have followed without the intervention of anything at all, and if, on the other hand, treatment is begun during a period of retrogression it is easy, although quite wrong, to attribute the continuance of the amelioration which follows to the influence of the treatment rather than to the fact that such periods of amelioration almost always follow and continue for some time after an acute stage. A method of treatment which was really curative would be marked by the apparance of the retrogressive stages at shorter intervals, by making these more complete, and by preventing the occurrence of the crises. The anti-leprous serum prepared and reported on by Dr. Carrasquilla does not satisfy these requirements, It is made by injecting horses with serum from the blood obtained by bleeding a leper. To take this point first, there is no proof that this human serum contains the specific leprosy microbe, and, again, the blood not being taken from the horses with strict antiseptic precautions always contains a multitude of organisms unconnected with leprosy. Nevertheless, it is generally well borne and seldom provokes any but slights reactions both local and general. As to its action on leprosy this appears to be but slight, the tubercular manifestations persist even after its use for a long time, and despite the assertions of its introducer it does not prevent new crises appearing. The periods of retrogression which appeared in lepers treated by this method in the hospital of St. Louis did not in any way exceed those which occur spontaneously after a crisis. An anti-leprous serum could more probably be prepared by injecting into some animal the lepra bacillus. It is proposed to continue investigations into the serum therapeutics of leprosy despite the many difficulties which surround the subject, not the least of which is the fact that leprosy cannot be cultivated in animals.

Successful Removal of a Cystic Abdominal Tumor from a Child of Seven Months.

John Campbell reports in the British Medical Journal what is probably the youngest case in which a cystic abdominal tumor has been removed. The child was delivered by high forceps after a difficult labor, but was apparently healthy till the age of four months when a swelling of the abdomen was noted which gradually increased and gave rise to attacks of colicky pain. The child came under observation at the age of seven months. The general nutrition was good; respiration was shallow; the abdomen was distended by a lobulated tumor, more prominent on the left side, hard above, soft and fluctuating below; the abdomen was dull on percussion except in the right hypochondriac region. The operation was done under chloroform; a median incision exposed a large tumor lying behind the posterior parietal peritoneum in front of the left kidney, pushing the intestines into the right hypochondrium. The cystic part was tapped and the whole mass enucleated from the sub-peritoneal tissue without bleeding. There was no pedicle but the tumor's attachment was deep in the left side of the pelvis. The peritoneal covering of the tumor was attached to the edges of the lower end of the wound and the cavity packed with gauze; the upper end of the wound was closed, the peritoneum with silk, and the skin and aponeurosis with silkworm gut. The operation was well borne except for a few seconds during the extraction of the tumor. The subsequent history was uneventful; on the sixth day the gauze was removed and on the eleventh the silkworm gut, the wound having healed except where the drain had been.

The child was seen five months after operation and was in excellent health, The tumor weighed three pounds; its cystic portion contained about ten ounces of clear yellow fluid, and in the solid part a mass of cartilage and a piece of bone were embedded. There was nothing to indicate the organ from which it originated.

The Dangers of Artificial Respiration.

Brosch, in the British Medical Journal narrates the case of a man aged 22, fourteen days after his discharge from the hospital as convalescent from diphtheria, was seen to get up suddenly from the dinner table, take a few steps toward the door, and fall down. The doctor was called and found the man apparently dead; he nevertheless tried artificial respiration for a long time, but in vain. At the necropsy food was found in the trachea and bronchi, and the uvula and soft palate were œdematous, Was the entry of food into the air passages during life the cause of death, or was death due to syncope? And did artificial respiration after death cause the entry of some of the gastric contents into the air passages? To throw light on this question Brosch made a number of experiments on dead bodies. He opened the stomach, put fluid into it, closed up the opening again, and ligatured the pylorus; artificial respiration—Silvester's method—was found to cause the aspiration of some of the gastric contents into the air passages. In a control experiment he did not open the stomach but contented himself with trying the effect of artificial respiration on the natural stomach contents; a similar result was quickly obtained, and the fluid contents of the stomach immediately began to fill the pharynx, flow out of the mouth, and enter the air passages; the fluid food was found in the trachea, main bronchi, and all the branches of the main bronchi. Brosch discusses various methods—preliminary tracheotomy, artificial respiration after the manner of Schuller, Howard, and Marshall Hall—and comes to the conclusion that, when there is reason to fear aspiration of gastric contents—the best way to avoid the possible fatal effects of artificial respiration is, before commencing the movements, to introduce an elastic tube into the œsophagus. This he thinks will likewise help to prevent the falling back of the tongue. The tube should, however, be sufficiently stiff to avoid its being quite easily pressed flat, in which case its lumen would be obliterated and it would be rendered useless. It should also reach at least fifteen centimeters beyond the pharynx into the œsophagus, and ten cms. of the tube should project from the mouth, and the outside end should be weighted down, so that, if any fluid comes out, it should not flow back into the pharynx again.

Treatment of Ovarian Tumors during Pregnancy, Labor, and the Puerperium.

Hohl, from a class study of five cases in which pregnancy was complicated by ovarian tumors draws the following conclusions:

(1) During pregnancy ovariotomy should, if possible, be performed in the early months. Premature labor should be favorably considered only in intraligamentous tumors when the operation is presumably difficult or in tumors which are fixed by adhesions. Puncture of the cyst as a therapeutic measure is out of the question.

(2) During labor the reposition of the tumor under anesthesia should, if possible, be done. Failing in this, cystic tumors should be aspirated, or they may be opened after vaginal incision. Cesarean section is indicated in solid tumors when the child is alive, ovariotomy at the primary operation or after the puerperium. The performance of ovariotomy and the termination of labor *per vaginam* is not permissible.

(3) After a woman has been delivered while having an ovarian tumor, the extirpation of the tumor should be performed at the earliest time possible, certainly not later than the second week of the puerperium.

A certain small number of persons can drink spirits daily in varying quantities for years, and seem not to be much injured by it. Then, all at once, they become diseased, some chronic or acute affection begins and goes on rapidly to a fatal issue.

Such persons have the appearance of health, but die suddenly, usually from heart disease, or cerebral hemorrhage, or pneumonia. The latter and Bright's disease are most common, and in all cases the disease is sudden and fatal. The degeneration from use of alcohol finally culminates in sudden fatal inflammation. The connection between the use of spirits and the disease is clear and positive, and yet unrecognized. The vital forces and powers of resistance are destroyed, and death follows, literally from alcohol.

If the druggist found that every attempt at substitution cost him the physician's patronage, he would soon become tired of it, and would supply exactly what prescriptions call for.

Salol in Typhoid Fever.

Bramwill, in the British Medical Journal, states that during the last ten years the use of salol in typhoid fever has afforded me the most gratifying results. When steadily given in frequent small doses, either alone or combined with diaphoretics or astringents or other drugs, as indicated, until the urine has become slightly tinged, marked benefit has invariably been obtained. Cases which appeared of a severe type and promised to result in a long and dangerous illness have been so modified by its use as to pass through mild and uncomplicated courses of three to four weeks duration.

In several mild cases of undoubted typhoid, as proved by the typical rash, the progress of the attack has been completely aborted and convalescence established in the course of two to three weeks.

The drug should be used in the powdered form, and not compressed, as in the latter case it frequently passes through the intestinal tract completely unchanged. It should be given in 5 to 10 grain doses (according to age) every four hours until the urine is tinged, when the amount and frequency of the dose must be diminished, giving only sufficient to maintain the faint coloration of the urine. Used in this manner it has, in my experience, invariably checked the increasing fever, and brought about a slow but steady defervescence, and improvement in all the other symptoms.

During the first few days of treatment cold packs and sponging is usually required in severe cases, but only until the drug has had time to affect the development of the poison.

The Fate of Ovaries in Connection with Retroversion and Retroflexion of the Uterus.

Dr. Goldspohn, of Chicago, presented a paper with this title at the recent meeting of the American Association of Obstetricians. He drew the following conclusions: (1) in all cases of retroversion and retroflexion of the uterus a knowledge of the ovaries as to their location, mobility and general physical condition should comprise an essential part in the diagnosis, as determining largely the nature and urgency of the treatment; (2) the welfare of ovaries in general, demands such a degree of anterior inclination of the longitudinal axis of the uterus as will enable intra-abdominal pressure to bear upon the posterior surface of the organ and thereby to act in unison with its other supports to retain it and its adnexa in normal position and function; (3) inasmuch as in the female pelvis, as well as elsewhere in the human body, the natural and considerable abilities of healthy tissues to defend themselves against microbic invasion (infection) are lowered or annulled in direct proportion to any degree of mechanical embarassments of the venous circulation in the tissues or organs, it behooves gynecologists especially to be alert in recognising and correcting all material anomalies in place or posture of the female generative organs or in securing to them their normal freedom.

The Great Death Rate in Havana.

Dr. Bruner, who is stationed there, in his recent report to the United States Government says:

"Deaths from starvation are occurring now daily and I would put the deaths from that cause at fifteen for the past week. If the number of deaths for the past week could be got at correctly this number would be doubled, but statistics here are hard to obtain. There were eighteen deaths from yellow fever reported in the City of Havana, sixteen among the Spanish soldiers and two among the civilians. I would state that these figures do not show the true state of affairs, bnt in my report for the month of September I embodied the correct yellow fever figures, which have been obtained after much expenditure of time and labor.

"Small-pox is again on the increase. There were four deaths during the week from this disease, none of them among the soldiers, but evidently among the country people who have been compelled to enter the city by the Government. The deaths from other fevers have not increased much, but the deaths from intestinal diseases are increasing daily. It will be noticed that there were eighty-eight deaths from enteritis and dysentery.

"It is impossible for anyone to have a correct idea of the lack of sanitation in Havana without an actual inspection of the premises and streets. For ten consecutive days it has rained hard, and the streets have been deluged with water for several hours during each day, yet pavements and sidewalks remain filthy. The water of the bay has grown filthier every day from the offal swept from the streets into the sewers and discharged by them into the bay, yet there appears to be much filth remaining."

Warmed and ventilated incubators for sickly babies can now be hired in Berlin, on a request signed by a medical man, at from $8 to $15 per month.

Creasote in Consumption.

At the Harveian Society, of London, Oct. 21, 1897, Dr. Clifford Beale read a paper on Recent Experience of the use of Large Doses of Creasote in Consumption Cases, and gave an account of a series of cases of incipient tuberculous disease of the lung and another series of the more chronic forms of the disease. (British Medical Journal.) The patients had been treated with doses of pure beechwood creasote dissolved in cod-liver oil, beginning with 3 to 5 minims, the same amount being added to the previous dose every alternate day until a maximum of 160 to 180 minims a day was reached. He had found that of all the methods of giving the drug, this appeared to be the least objectionable to the patient. The results achieved had been highly satisfactory, and in some cases most striking, the most marked effects being produced when the larger range of dose was reached. The fall of temperature, gain of weight, and general subsidence of symptoms had in many instances been surprising, and seemed to be more definite and lasting than the degree of improvement commonly observed as the result of hygienic treatment only. Contrary to expectation, no complaint was made by the large majority of patients of the smell of the drug, and it was probably both from clinical observation and chemical experiment that the creasote was very rapidly broken up in the stomach, possibly forming a more stable compound, in which form it was very freely and rapidly excreted by the kidneys. Its presence could only be detected in the urine after further distillation with strong sulphuric acid. In many instances the patients passed blackened or greenish urine, but it could not be ascertained that either the quantity or the chemical composition of the urine was otherwise materially altered, and there were no unpleasant symptoms attending the altered color of the excretion. Further chemical investigation was, however, necessary to explain some of the changes which the drug underwent in the body. As a result of purely empirical use it appeared that an amount of success was to be obtained from its employment, especially in early cases, which was quite equal to, if not better than, the results obtained by the more specialised preparations, such as guaiacol and its carbonate, and it was evident that it could be well tolerated when dissolved in cod-liver oil, and hence the painful and unpleasant methods of introduction, such as subcutaneous, or rectal, or tracheal injection, were rendered unnecessary. The drug was not to be regarded as in any sense a specific remedy for the disease, but rather as a useful adjunct to the many existing methods of hygienic treatment at present in use.

The Carriers of Diphtheria.

The length of time during which the bacillus of diphtheria may continue in the throat after an attack of the disease is a matter of the greatest interest, for on it depends to a large extent the possibility of arresting the progress of diphtheria by means of isolation. (The Hospital.) But an even more important difficulty in tracing the origin of infection and in preventing its importation arises from the fact that the bacillus may exist in a state of virulence in the throats of apparently healthy people. A person, for example, who happens to be immune to the disease, at any rate for the time, is exposed to the infection. The microbes lodge and develop, and remain virulent. No disease, however, is produced, and nothing happens to attract attention to the fact that this person is a carrier of infection. It is to be feared that it is practically impossible to eliminate this source of disease. Of course, the chief means by which immunity is produced is a comparatively recent attack of the malady itself. In such cases when the attack is over, the microbes may remain, and in consequence of the patient's acquired immunity he may feel no inconvenience. The most striking instance of this condition is a French case, in which the bacillus was still to be found at the end of fifteen months. Another case is reported in which Dr. Hewlett found the bacillus at intervals during twenty-two weeks; and its persistence for three or four weeks after apparent convalescence is by no means uncommon. Now it is easy to say that such cases must not be allowed to mix with other people until their throats have been shown to be free from infection, but a much more serious difficulty looms behind. These immune individuals, if exposed to infection again, may catch it afresh, and carry it about with them without showing any signs. A case is reported by Dr. Foulerton, of the British Institute of Preventive Medicine, in which the sequence of events occurred, and a consideration of the facts of the case makes it quite obvious how enormously difficult it must be to obtain effective control over an infection which is liable to take root and be distributed in such a manner.

The Princess Frederice Leopold of Prussia is undergoing a regular course of training as a hospital and field nurse.

Vomiting While Under Anæsthetics.

The occurrence of a case of death while under an anæsthetic (gas and ether), due apparently to the inhalation of vomited matter, has led Mr. Bertram Hunt to discuss again the advisability of washing out the stomach in cases of intestinal obstruction requiring operation. (The Hospital, Oct. 16, 1897). Several dangers are apt to arise from leaving the stomach loaded in such cases. (*a*) The absorption of the poisonous material which accumulates in the stomach in most cases of obstruction, often causes severe toxic symptoms, and even death, some hours after the obstruction has been relieved by operation; (*b*) vomiting may occur, and the stercoral matter being inhaled into the lungs during anæsthesia, or even an hour or so after recovery from it, may cause death; (*c*) a minor degree of the same accident may set up severe or fatal septic pneumonia.

The late Mr. Greig Smith advised that in any case of intestinal obstruction with a distended stomach either the stomach should be washed out before giving the anæsthetic or a local anæsthetic only should be used. There is, however, this disadvantage in such a proceeding, that the necessary manipulations in a conscious person often cause such retching that collapse may easily occur when a patient is already in a critical condition, and Mr. Bertram Hunt, balancing the advantages and disadvantages of the various courses open to the surgeon, concludes in favour of performing lavage as soon as the patient is fully under the anæsthetic, taking means to minimise, as far as possible, the danger from vomiting occurring before the stomach is emptied.

Syphilis as a Cause of Abortion.

Onimet, after many years of study and observation, draws the following conclusions:

1. Syphilis is a powerful cause of abortion. The abortion is due to lesion of the fetus itself or of its appendages.

2. It occurs usually about the seventh month. The father alone, being syphilitic, can transmit the syphilis to the product of conception; the latter is more liable to occur the nearer the moment of conception is to the beginning of syphilis.

3. The mother may give birth to a syphilitic child while remaining free from syphilis.

4. When the father and mother are both syphilitic, the child rarely escapes infection.

5. The mother being syphilitic before pregnancy is the more liable to give birth to a healthy child the more ancient the syphilis.

6. The nearer the syphilis approaches the termination of pregnancy, the greater chance the child has to escape infection.

7. The child born of a syphilitic mother may come into the world presenting lesions manifestly syphilitic, or be born apparently healthy and only become syphilitic after some months, or even years.

8. Syphilis imparts no particular characteristic to the course of confinement. Mercurial treatment instituted at the beginning of pregnancy in syphilitics permits the mother:

a. Often to carry gestation to term.

b. To give birth to a living, though sometimes syphilitic child.

c. In some cases to give birth to a living child and without lesions.

d. Sometimes the child, born healthy of syphilitic parents, remains free from syphilitic troubles, when the mother has been treated during pregnancy.

When, the father being syphilitic, the mother becomes pregnant and submits to mercurial treatment, there is much chance that gestation will terminate at term in the birth of a healthy child.

Vaginal Douching.

Giles, in the Lancet, reviews this subject, giving some of the circumstances when it is required; but he utters a word of warning against the almost universal practice of vaginal douching by the laity under the direction of physicians and nurses. The researches of Winter, Doderlein, and others have shown that the vagina is normally inhabited by a certain bacillus to which, through the formation of lactic acid, the acidity of the vaginal secretions is due, and the special role of which appears to be to antagonize and disarm any pathogenic organisms that may enter the canal. But too frequent douching destroys this power of the vagina, and tends to produce a morbid condition rather than a beneficent one. The same rule applies to the practise of giving a vaginal douche before or during labor; for when this is normal, the uterine and vaginal secretions, followed by the rush of liquor amnii, tend to sweep the passage in the most effective way, namely, from within outward. The writer also protests against the prolonged use of the hot douche, he believes that many cases of chronic pelvic congestion have resulted from its use.

Nutrient Preparations as Substitutes for Meat, with Special Reference to "Nutrose."*

Opinions as to the value of artificial nutrient preparations and the limits of their employment are now so far developed, that there is general accord in the view that wherever possible they should not be allowed to take the place of our ordinary diet, however subtle their preparation, and that they only constitute a valuable addition to our ordinary diet, which in no case can be completely dispensed with. Artificial food stuffs are however indicated, and there is no desire to displace them, in cases of diseased stomach or intestines or of an invincible repugnance to a certain kind of nourishment, or where ordinary food cannot be properly assimilated.

Therefore it is necessary for the physician to be cognisant of the composition of the various preparations and pay special attention to the indications for their employment. If, for instance, the digestion of starchy foods is deranged or incomplete, (secretion of excess of acid), a diastatic malt extract or a dextrin flour may perhaps be administered to lighten the work of the stomach. In order to increase the supply of fat, Mering's chocolate may be given with advantage. In consumptive diseases, in order to make the food more nourishing without increasing its volume, preparations like hygiame, leguminous flour, malto-leguminose, etc., are employed. Again, wherever it is necessary, as is so frequently the case, to enrich the food in albuminous or nitrogenous constituents, either because the albuminous constituents are not present in sufficient proportion in the ordinary food, or they cannot be assimilated or absorbed (as is frequently the case with a meat-diet), recourse is made to one of the numerous meat substitutes.

Different methods have been adopted to gain this end. First of all may be mentioned the numerous extracts of meat (Liebig, Cibil, etc.,) and meat-juices (Valentine, Wyeth, Brane, etc.), although the actual nutrient value of these is small, and their stimulant action is most in evidence. Then there are the leguminous preparations already mentioned. A further stage in this direction is furnished by the large group of albumoses and peptone preparations. These have been recommended from the consideration that the digestive organs are spared part of their necessary work of peptonisation, and it was determined by experiments scientifically indisputable that they are able to replace the albuminoids in our food. Subsequently it has been proved by numerous investigations however that there is no theoretical basis for their employment as artificial food stuffs, and that the albumoses and peptones present no advantages over suitable albumens, whilst there is scarcely a preparation of this class which does not cause irritation of the alimentary canal. Amongst these may be mentioned as typical Witte's Peptonum siccum, Koch's peptone, Liebig-Kemmerich's peptone, Weil's casein-peptone. Ross & Co.'s Strength Beer, various peptone chocolates and cocoas, Timpe's invalid soup and Leube Rosenthal's fluid meat, of which several will be referred to in greater detail below. More recently the peptones and albumoses have, for the reasons indicated above, been abandoned and attention paid to the preparation of suitable albumen compounds, of which two especially, Eucasein and Nutrose, derived from the casein of milk, deserve consideration and form the subject of this monograph. Of the older preparations there however still remains to be mentioned Debove's Meat Powder, and the Aleuronate flour prepared from vegetable albumen and for many purposes very useful; and of the newer preparations Protogen, an uncoagulable egg albumen.

To the most useful of these preparations we will devote a few words.

Of all the so-called "peptones" the preparation most employed is undoubtedly what was Cemmerich's and now Liebig's. Nevertheless on administration of large quantities diarrhœa very frequently appears as an undesirable secondary effect, so that a tendency to diarrhœa and a sensitive alimentary canal which does not tolerate the slightest irritation are conditions which contra-indicate its employment. In other cases this character may however be advantageous, and observations were recently made in Gerhardt's clinic which tend to show that small quantities possess a favourable influence upon the depressed appetite in addition to their vicarious value; even taken in larger quantities no diarrhœa was caused in these cases. Yet in our experience it occurs fairly frequently when more than about an ounce has been taken, and consequently it cannot be given for a prolonged period, because it soon becomes nauseating to the patient, although the taste is not bad. With these limitations the preparation is very useful and also cheap.

A similar condition of things obtains with that excellent albumose preparation, Somatose. The flavour is no hindrance to the exhibition of unlimited quantities, as

* Dr. Bruno Oppler.

the preparation is completely tasteless, soluble and easy to administer. Its vicarious action and nourishing value are as well established as in the case of Liebig's peptone. The high price is however a drawback to its general employment and the frequent occurrence of diarrhœa when more than an ounce is taken is coincident with bad assimilation; apart from the question of price it appears nevertheless preferable to Liebig's peptone. The quantities permissible in either instance appear to us however too small for our purposes, as in the case of peptone it corresponds to about half-an-ounce of albumen, and in the case of Somatose perhaps a little more. Even if we estimate the daily consumption of albumen only at three ounces, more than three-fourths have still to be provided for in some other way, and, as we shall see, this is far too much in many of the cases which come before us.

The new uncoagulable and consequently sterilisible egg-albumen, named Protogen, prepared by the action of Formalin upon white of egg is recommended as a nutrient upon the theoretical advices of Blum Assimilation experiments and a few practical trials have already been made with not unfavourable results. The administration of sufficiently large quantities of this voluminous preparation does not however appear easy and only possible in soups; the taste is said to be not unpleasant. The criterion of employment of this new preparation apparently consists in its adaptation to nutrient enemas and perhaps to subcutaneous alimentation, but an opinion upon the whole question can only be formed from wider experience.

There remain to be considered the two casein preparations, Eucasin (Casein-ammonium, prepared by Majert and Ebers) and Nutrose (Casein-sodium, prepared by the Hoechst Farbwerke both of which depend upon the same principle, and may therefore be considered together. Both are prepared from the casin of milk and therefore it is necessary at once to meet the possible objection, in what respect are they preferable to milk? In the first place it is possible to give albumen without the accompaniment of the milk-sugar and fat; further large quantities may be administered without materially increasing the volume of the food, which contra-indicates the exhibition of milk; moreover milk very frequently cannot be tolerated, causing diarrhœa, etc., and troubling with hard coagula; finally a practically unconquerable idosyncrasy often prevents the administration of milk. For all these reasons a comparison between the two is scarcely possible. Nutrose is a white powder, Eucasin somewhat yellowish; neither have any pronounced flavour and suitably exhibited are not tasted. With Nutrose there is a very slight odour of alcohol, whilst Eucasin smells strongly of cheese, even when the package has been opened a short time. It may therefore be assumed that Eucasin, as an unsterilised preparation, more easily undergoes a slight degree of putrefaction than Nutrose, which practically may be regarded as a sterile preparation. This solution of Nutrose exhibits a slightly acid reaction towards phenolphtalein but is capable of fixing a fairly large quantity of hydrochloric acid before free acid occurs. Both are taken by patients with equal willingness. Administration is best made dissolved in soups, milk, cocoa, etc., or by cooking with rice, grain, etc. It is soon found out however that Eucasein is less easily exhibited, because it separates the lactic acid from milk and by solution in other cold or warm media it always leaves an insoluble residue, whilst Nutrose, when stirred with luke-warm water and afterwards heated, give a complete solution in nearly all proportions; naturally the more concentrated solutions are more thick and starchy. On the other hand the price of Eucasin is less than that of Nutrose. In spite of this I have prefered Nutrose for the reasons given above especially as it is only two-fifths the price of Somatose, and have carried out the following experiments with it. The arguments and results will however mutatis mutandis also apply to Eucasin and other casein preparations which may appear.

The utility of casein and of its preparations was first indicated by Salkowski (Berliner klin. Wochenschrift, 1894, No. 47) and Rohmann (Tageblatt der Naturforscherversammlung in Vienna, 1894, and Berliner klin. Wochenschrift, 1895, No. 24). Since then it has been demonstrated, especially in the case of Nutrose, by exact assimilation experiments (G. Marcuse, Pfluger's Archiv, 1896; R. Stuve, Berliner klin. Wochenschrift, 1895, No. 20; K. Bornstein, Deutsche Medicinalzeitung, 1896. No. 51). Absorption and utilisation of the preparation has proved to be very complete and simultaneously proof has been afforded that the albumen of ordinary food may be wholly or partially replaced.

Experience characterises equally favourably the acceptability of the preparation, the absence of undesirable bye-effects and of repugnance arising from continued exhibition (Stuve, Bornstein, loc. cit.) Our own experience in this direction materially

bears out these results. With a single exception Nutrose was taken in all cases willingly or at least without aversion, even for a long time. The exceptional case was that of a very nervous female patient who possessed an instinctive aversion to all such preparations; it was so far overcome in this instance however that 12 ounces could be given in eight days. In no case were evil bye-effects of any kind whatever observed, in particular no irritation of the stomach or intestines, which is all the more important as the patients to whom the preparation was exhibited, all suffered from disease of the digestive organs. With the largest quantities administered the motions were not affected, so that it could be given even when diarrhœtic stools occurred. The appetite and the quantity of other nourishment taken experienced no reduction, so that the food partaken of was increased by the total amount of Nutrose administered. It appears to us of the greatest importance in this respect, that very considerable quantities of the preparation may be given: 1½ to 2 ounces are taken without any difficulty, and even 2½ to 3 ounces were willingly taken for prolonged periods, interrupted by short pauses. Consequently we are enabled, as the preparation contains about 90 per cent. pure albumen, to cover two-thirds or three quarters, and in some cases the whole, of the supply of albumen required by an invalid. This effect could not be attained to by former preparations an account of irritation of the digestive tract by large quantities, and also by reason of the price.

Administration is in our experience preferably effected in all kinds of soups (1 to 1½ tablespoonfuls = ⅛ to ½ ounce in each plateful), milk, coffee, cocoa (⅛ ounce to each cupful, or, where less liquid and more solid food is indicated, together with pearl-barley, rice, oatmeal, etc. (½ to ⅔ ounce in each portion). In special cases Nutrose mixes extremely well with various jellies or creams. The question of administration per rectum will be discussed later.

The indications for the employment of casein preparations, especially of Nutrose, are manifold. Excluding for the present affections of the digestive organs, which will be considered separately, there present themselves in the front line consumptive disease such as tuberculosis and the like, cardiac and renal affections, cachexia from whatever cause, constitutional anæmia or after hæmorrhage, and all affection in which it appears desirable to increase the albumen contents of the food imperceptibly. Likewise in the frequent repugnance exhibited to flesh food in chlorosis, diabetes mellitus, etc., and in the convalescence of invalids, in order to convey to the system as much as possible easily assimilated food. Operations on the rectum, after which a less voluminous diet is desired, febrile diseases, e. g. typhus abdominalis, in which principally only fluids can be taken, afford further indications. Finally the employment of the casein preparation is recommended in gout and uric acid diathesis, as we are thereby enabled to convey to the system the necessary quantity of albumen without the nuclein which makes meat a forbidden diet to the gouty patient—a postulate which was not fulfilled by the nitrogenous nutrient preparations hitherto known, made from meat.

The broadest field of employment for Nutrose is however in the numerous diseases of the alimentary canal. To this category belongs by far the largest proportion of our own observations and experiences. Altogether there are 30 cases, in which we have employed the preparation, mostly giving it for a prolonged period.

Beginning with diseases of the oesophagus, stenoses first of all come under consideration, mostely cautery strictures and carcinoma. As we have found in two cases, it is easy, by means of dissolved Nutrose, to give sufficient quantities of albumen to the patients, who are confined principally to fluids and cannot even enjoy milk on account of the cheesy coagulations which form above the diverticles. In one case of carcinoma in the neck it was indeed possible in this way to effect an increase of weight in the extremely reduced patient. Apart from the prolongation of life thus effected, the strength may in individual cases be so improved that a gastrotomy may be rendered possible which had been previously scouted, or a patient may be maintained in strength during the dilatation treatment of a cicatrix stricture.

In diseases of the stomach diminution or failure of hydrochloric acid in the secretion, from whatever cause, is a sure indication. In all such cases the digestion of meat and eggs, and frequently of milk also, suffers, and the partial substitution of these valuable albuminoids in our food appears urgently desired. This is least needed where a certain compensation is afforded by nature in the good motoric activity of the stomach and the intact functions of the smaller intestine, for instance, in the commencement of simple gastritis and in nervous anacidity; nevertheless even then it is advisable to cover a part of the albuminoid consumption by Nutrose, which, being easily assimilated, affords no difficulties in intestinal digestion, and may avoid the later

complications of intestinal insufficiency and compensation disturbances arising therefrom.

The necessity of this step is more emphatically impressed upon us if, as is frequent in cases of gastritis with lack of hydrochloric acid, the digestion of meat is accompanied with subjective and objective troubles, as for instance, painful pressure, wind, bodily disquietude, eructations, nausea and vomiting. All these symptoms increase to the highest degree if the secretory weakness is accompanied by motoric debility, either by development of atony of the walls of the stomach, or if in the converse case disturbance of the secretions develops from this cause. Patients then instinctively avoid food, from fear of what it gives rise to, and consequently generally come to us in an extremely emaciated condition, so that the circulus vitiosus is closed and motility and secretion still further deranged. In such a case it is of the utmost importance to possess a preparation with the properties of Nutrose, and we have employed it in all these cases with the greatest success. A temporary banishment of meat from the table and substitution of about 1½ ounces Nutrose in soup or rice, with the addition of a few raw eggs and suitable treatment, has caused the symptoms to disappear, whilst at the same time the supply of albumen has been fairly well provided for. If then subsequently the daily amount of Nutrose be reduced to one ounce, and delicate meat dishes be added to the menu, they will be extremely well tolerated. Without exception we have discharged our cases after several weeks treatment with an increase in weight, sometimes to a very considerable extent.

A very similar dietetic problem is presented in stenosis of the pylorus, complicated with anacidity, and exclusive of carcinoma of the pylorus. In such cases artificial nutrient preparations are indicated because meat and eggs cannot undigested pass the contracted pylorus and consequently undergo the foulest decomposition; even milk is seldom tolerated. With Nutrose much can be accomplished under such circumstances and the patient be prepared for operative measures which in stenosis of high degree cannot be avoided.

The same remarks apply generally to carcinoma of the stomach; I have had four cases under observation. On account of absence of hydrochloric acid and the loss of motility, and because on the one hand it is so difficult to guard the patient against loss of nitrogen even for a short period, and on the other there exists generally an almost invincible repugnance to meat, Nutrose is in such cases of great value, as fairly large quantities may be almost imperceptibly administered. Even in an inoperable case and in two cases where operation was refused, it was possible to effect temporary increase of weight to a considerable extent. Also in carcinoma of the pylorus, where all the unfavourable factors are combined, it is possible to check the rapid loss of strength. Even here administration of Nutrose affords no difficulty and remains free from all bad effects.

Hitherto we have only spoken of conditions arising from or accompanied by insufficient secretion of the stomach juices; we now will consider conditions of irritation accompanied by hypersecretion. Although in these affections there is generally excellent digestion of meat in consequence of the increased secretion of hydrochloric acid, yet in the irritated condition of the stomach it is frequently necessary to prescribe a limited diet if only as a temporary measure. This problem presents itself in the affection known as gastritis acida and in ordinary ectasia ventriculi, more frequently in hypersecretio continua accompanied by hyperacidity, and most frequently of all in ulcus ventriculi. In all these affections we have made use of Nutrose with advantage, and it is all the more suitable in consequence of its ability to combine with acid. As typical of this sphere of employment we will make a few remarks upon its use in the last-named disease, of which three cases came before us.

A distinction must be drawn accordingly as a recent hæmorrhage or other symptoms of acute ulceration manifest themselves or a more chronic condition obtains. In the latter case we are comparatively less seldom compelled to have recourse to an artificial nutrient, as generally a limitation of the diet and careful preparation of the ordinary food suffice. Nevertheless both in this and in the other form of the disease it may appear desirable to assist the diet with an easily assimilable albuminoid preparation like Nutrose. In acute ulceration it is undoubtedly of the greatest value. With the absolute milk-soup diet, which must in such cases be adhered to for weeks, there is always about an ounce of albumen to make up, which Leube has attempted to do by means of his extract of meat, and others with the aid of Somatose. These are however absolutely refused by many patients and only unwillingly taken by the majority; whilst there is also the high price to be thought of and the irritation to be considered. In three such cases we have given Nutrose in quantities of 1 to 1½ ounces, which was easily incorporated in the other-

wise liquid diet (soup, milk), and the results were most satisfactory. Neither irritation nor any occurence which disturbed the normal course of healing was observed, whilst we succeeded in avoiding the usually inavoidable loss of weight, or at any rate reduced it to a minimum.

With regard to neuroses of the stomach a word remains to be said. The employment of Nutrose is likewise recommended in these persistent irritated conditions, such as gastric crises, nervous gastralgia after partaking of food, nervous hyperacidity, etc. We have had some experience in this direction, as well as in persistent anorexia, where it is required to supply as much nourishment as possible in a small volume. Even in the treatment of obesity it may be employed.

It is almost unnecessary to mention that in the first days after operations on the stomach Nutrose may be combined with the liquid diet with advantage.

In diseases of the intestines many opportunities are likewise afforded for the employment of this preparation. Thus in acute enteritis during the astringent dieting we have twice given it experimentally in order to preserve the general condition as much as possible. We have likewise given it several times with equally good results in cases of chronic enteritis, which are especially sensitive to meat and eggs.

A group of diseases to which we desire to give closer attention is that of chronic diarrhœas, in the first place because the employment of Nutrose appears specially indicated and secondly because we have had opportunity of maturing a richer experience with the preparation in this direction. Cases of chronic diarrhœa, dependent upon lack of hydrochloric acid in the stomach juices, have already been reported by us in extenso in this journal (March, 1896) and in other places (Deutsche med. Wochenschrift, 1896, No. 32). For the first few weeks all meat must be strictly avoided and even after that should only be allowed in small quantities under careful supervision. The deficit of albumen we have sought as far as possible to supply with raw eggs, leguminous vegetables, aleuronat, etc., and formerly recommended for the same purpose both Leube-Rosenthal's meat juice and Somatose. In doing so however we were not deceived, but recognised that our purpose was only very incompletely attained by the small quantities (teaspoonfuls daily) administered. Loss of weight consequently could not at first be avoided. In six cases we have succeeded by the liberal administration of Nutrose during the period of strict liquid diet and abstention from meat in maintaining the original condition of the body and very soon to effect a gain in weight without diminishing the effect of the treatment, the production of firm normal stools. The continued administration of small quantities of Nutrose was also found advantageous to the prtient, as the employment of a meat diet must for a time be carefully restricted.

Finally the employment of Nutrose is advisable wherever a small volume of fæces compatible with as rich nourishment as possible is desired, for instance, only to give two illustrations: where it is desirable to distend the intestines as little as possible on account of danger to the ileus, and after operations on the larger intestine, in order to restrain defæcation as long as possible.

We have also employed Nutrose in the form of nutrient enemata in some cases of stenosis of the pylorus (through cicatrisation and carcinoma) and in one case of persistent chronic ulceration of the stomach. It was used both alone in aqueous solution with addition of salt, and also as an addition to the ordinary egg and milk enemata. No trace of irritation was observable; these enemata were retained as well as any others and the stools were approximately of the same quantity and character. To decide whether and how much of the casein is absorbed requires the execution of exact assimilation experiments, which from external reasons we could not on these occasions carry out. Until such have been made an addition of Nutrose to the ordinary nutrient enemata may be made without fear of any unpleasant consequences.

All the important points which have been met with in our own experience of the employment of Nutrose in diseases of the alimentary canal are now exhausted. That our opinion is a favourable one is seen from the foregoing and we do not hesitate to warmly recommend in such cases the employment of casein preparations, especially of Nutrose.

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The Treatment of Insomnia.

Dr. Wilcox of New York, discussed this subject at the Montreal Meeting of the British Medical Association. He said:

The treatment of insomnia is the treatment of a symptom; an important symptom, it is true, but still it is a symptom. I am in thorough accord with Patrick when he says: "Insomnia is the result, not the cause, of cerebral affections, and it does not give rise to organic disease. It may be the earliest manifestation of otherwise latent brain disease, and the conscientious physician will search this out and treat it; not attempt to avert some indefinite and vaguely threatened disaster by attacking the insomnia." As for its relationship to other pathological conditions we know that it is a symptom of various habits, for example, alcohol, coffee, tobacco. Here prevention is essential, and hypnotics are only temporarily necessary. If study or business are taken into the hours of sleep, this insomnia, truly a simple insomnia, is to be treated antipathically—the habit of sleeping must replace the habit of sleeplessness. Measures other than drugs are required. If sleeplessness is the result of pain, another symptom, the cause of the latter must be sought out and relieved, either by the cause being removed, or if this is impossible, a narcotic, not a hypnotic, is indicated. If there are circulatory disturbances the condition of the heart and blood vessels needs investigation and hypnotics have but a temporary use. Should the patient be afflicted with goutiness—and Ewart deserves our thanks for coining a useful term—quite likely sodium phosphate, sodium salicylate, piperazine, or uricedine in this instance will prove to be a valuable hypnotic. Again, if we are dealing with kidneys in which arterial degeneration has taken place systemic blood vessels are contracted and the wall of the left ventricle is thickened, the nitrites may relieve the insomnia. In the anæmia, or rather hydræmia, of the young woman, iron in organic preparation will be a true soporific. Instances might be multiplied.

It is essential that we have at our disposal safe, reliable, and pleasantly acting hypnotics. Sleep is as essential as food; the organism cannot dispense with either. They are of nearly equal importance. There is scarcely a morbid condition of which the prognosis does not become markedly worse if insomnia supervenes. Just so far as impaired nutrition militates against cure so far sleeplessness becomes an important factor.

Drugs alone are not sufficient; the cause of the symptoms having been ascertained and, if possible, removed, physical therapeutics should be employed. When all has been accomplished that is possible from hygienic and physical measures there yet remains an important place which drugs, and drugs alone, can occupy. This drug treatment of insomnia is well worth our careful study. Routine prescribing is utterly indefensible; equally so is the reckless administration of drugs. Insensibility is not sleep. The question is not "how large a dose can the patient survive?" but "how little of the drug will produce a sleep closely approximating the normal, and what remedy will give rise to the fewest and most insignificant after-effects?" We desire sleep-persuading not sleep-compelling drugs.

Employment of Cold in Infectious Diseases

The editor of Treatment, London, under this heading, says:

It is now generally acknowledged that cold baths, cold packings, and spongings in cases of acute fevers do not merely act by lowering the temperature of the body. Some form or other of cold hydrotherapeutic application is now not rarely employed in acute infectious diseases, even when the fever is not very high, for in addition to the subtraction of heat, cold or tepid (but relatively cold) baths and other cold applications exercise a tonic effect on the nervous system, increase diuresis (and excretion of the specific toxins), etc. It has likewise been suggested that part of the beneficial effect of these agents is due to some stimulant action on the cells of the body concerned in the manufacture of antitoxins, and certainly there seems nothing improbable in this view. One may further enquire whether the cells whose excessive activity gives rise to the increased heat production of fevers are not the same as those concerned in the production of antitoxins. Doubtless more light will soon be thrown on these points. It is suggestive that in early cases of pulmonary tuberculosis (the type of chronic infectious diseases) the comparatively cold climates of high altitude are so often found to act beneficially when residence is sufficiently prolonged. Hydrotherapeutic applications are also found of some utility in phthisis. It is certainly tempting to suppose that both these physical agents owe part of their effect to stimulation of the cells concerned in heart production, supposing likewise that these same cells are concerned in the production of a substance antagonistic to the tubercle bacilli or their toxins.

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Post-Climateric Conditions that Simulate Advanced Uterine Cancer.

Dr. Rosenwasser, of Cleveland, Ohio. presented a paper with this title at the recent meeting of the Am. Association of Obstetricians and Gynecologists. He said:

Irregular hemorrhages and sero-sanguinous discharges, whether occurring during the parturient stage or long after the menopause, are good and sufficient reasons to suspect malignancy. We carefully watch for early symptoms, and by their detection occasionally succeed in removing the disease while it is still local. On the other hand, we are sometimes caught off our guard when confronted with post-climacteric cases presenting all the classical characteristics of advanced malignant disease. Without the same circumspection exercised in the early stages, we thoughtlessly pronounce the case beyond remedy or hope, specifying even the extreme possibility of life. The text-books are deficient in not sounding a note of warning against possible errors in the late stages. The so-called classical symptoms may be due to other (non-malignant) conditions of the genital tract. Owing to effacement of the vaginal portion of the cervix in old age, the differential diagnosis is in most cases limited to corporeal diseases of the uterus. Before the diagnosis of corporeal cancer can be made other diseases must be excluded.

The conditions which are likely to simulate advanced cancer are the following: Senile vaginitis; foreign bodies in the vagina; gangrenous fibroids; atrophic, senile, or post-climacteric endometritis; and post-climacteric pyometra. Of these conditions the last is especially liable to lead to errors. The writer gives the details of a case of pyometra occurring recently in his own experience, and submits abstracts of five more or less similar instances found scattered in the literature of the past seven years. In all these cases either a positive or a provisional diagnosis of corporeal cancer had been made.

In conclusion the doctor calls attention to the singular fact that in the presence of the essential predisposing conditions—age, low vitality, cicatricial tissue, adhesions, chronic inflammation, and irritating discharges—cases of transformation into malignant disease are either unknown or exceedingly rare.

Transmission of Typhoid Fever Germs through the Air.

According to the investigations of Germano under Finkler's directions. the germ of typhoid fever cannot resist complete exsiccation; therefore, it cannot be transferred to man by means of dry dust, but the bacillus retains its virulence in semi-dry medium, such as laundered clothes, wearing apparel, wood, and dirt mixed with fecal matter, etc. In all probability, most infections occur through contact with objects of this kind.

Papain and Its Uses.

Robert Peter, M. D., in Toledo Medical and Surgical Reporter, says:

This remarkable vegetable enzyme, has now been in therapeutic use for some years. Through the efforts of the manufacturing chemists, Lehn & Fink, of New York, it was first made known to the medical profession of the United States, and the good reports on papain which appeared in the medical press a few years ago were all based on experiments made with their preparation.

Papain is the active principle isolated from the dried milk juice of the Carica Papaya (Papaw Juice). It occurs as an amorphous, white or yellowish white powder, soluble in water. One part will dissolve one hundred to two hundred parts of blood fibrin. Papain possesses the peptonizing properties of Papaw Juice in a high degree of concentration, and has the power to dissolve more meat peptone or coagulated albumen than pepsin, and in a much shorter time. It should also be noted that unlike pepsin, it is equally effective in acid, neutral or alkaline solutions, and that it has therefore the digestive action of both pepsin and pancreatin. It should be further remembered, that besides its digestive action, it also prevents fermentation of food, and increases the digestive juices. By virtue of these properties it has been given with considerable success in the treatment of the many gastric and intestinal troubles, proving very valuable in dysentery and chronic diarrhea of infants.

One of the first uses that has been made of papaine was to employ its solvent powers in the solution of false membranes of diphtheria. For this purpose it is used in a five per cent. solution, brushed or sprayed on affected parts. Experience characterizes it as the best and most rapid solvent for diphtheritic membrane. It has also been given internally in these cases in connection with cinchona.

Papain has been very effectively employed as a remedy for tænia. For this use in cases highly endorsed by Bartholow. He thinks that it is most probable, that the papain has a toxic influence upon the worm, causing it to relax its hold on the mucous membrane. It should be given in ten grain doses, three times a day, followed by castor oil.

Locally, it has been satisfactorily employed in cases of lupus vulgaris, and in cases of crustaceous eczema. In these cases the morbid tissue is broken down in solution, thus removed and a clean surface secured. It has hence also been used in cancerous tissues.

Papain is the remedy *par excellence* in diseases of the digestive tract. Its extensive digestive action throughout the entire digestive system and its good healthy action upon normal mucous membranes, warrant its manifold application in all diseases of the stomach and bowels. It is therefore needless to enumerate the many conditions such as dyspepsia, gastric and intestinal catarrh, etc., etc., in which we can not do better than employ it. Now that we are in the midst of the season of heat, most trying to infaucy, its use may come in well in the summer complaints, and if need be, combine it with other appropriate remedies. It may be given in doses from 1 to 5 grains; children in proportion, according to age.

Serum Treatment of Puerperal Sepsis.

Barton Cooke Hirst, in American Journal of Obestetes, reports three cases of puerperal sepsis treated by anti-streptococci serum. The first case promptly recovered; the second case grew steadily worse, and died; and the third case showed alarming symptoms after each injection, but recovered. Hirst does not believe we are in a position to pronounce any judgement in this new treatment.

The following objections may be urged aganst the treatment with considerable force:

1. The well-tried older plans of treatment will result in a cure of about four-fifths of the cases; hence recovery may be attributed to the serum when it was really due to some other form of treatment.

2. It is difficult to procure a thoroughly reliable preparation of the serum.

3, The use of this remedy must be always more or less empirial, as there are a third or more of cases of puerperal sepsis in which there is a mixed infection, or in which the infective agent is not the streptococcus at all. A bacteriological examination of the uterine discharges is not enough to solve this question.

4. The treatment is not entirely free from risk.

5. There is some danger that too great reliance for a time might be placed upon this form of treatment to the neglect of olded, better tried, and perhaps more successful plans.

6. No one yet knows how this remedy acts; if it simply produces a hyperleucocytosis, there are others and simple agents which will have the same effect.

Practical Evidence.

I used your sample of Resinol on myself for Pruritus Ani, which has been my curse for several years, defying all applications. The first application proved efficacious, and I am now using and prescribing Resinol for the above and several other itching troubles. In fact, I think it is the best remedy I have ever used for the diseases for which it is recommended.

H. B. Leighton, M.D., Boston, Mass.

I have used your Resinol in Inflammatory Rheumatism with happy results. Hope others will try it. I know they will be pleased.

E. J. Burnside, M. D., Phila., Pa.

It gives me pleasure to say that Resinol is the best application for local treatment of Eczema I have ever used. I can also bear testimony to its efficacy in Erysipelas, and its soothing and healing virtues in all inflamed surfaces.

A. S. French, M.D., Lawrence, Mass.

It is but just that I should attest my satisfaction with the use of Resinol. It is a marvel of efficacy in Pruritus Ani. In relief of soreness, due to scalding from acute Nasal Coryza, it acts like a charm.

J. H. Thompson, M.D., Goshen, N.Y.

Resinol is by far the best application I have ever used in a practice of 48 years for the diseases recommended. A case of Eczema commencing on the scalp and extending over the entire face and which had been under the treatment of various physicians with no apparent benefit, was completely cured by it in less than two weeks.

J, J. Worthy, M.D., Lavalle, Wis.

I am very much pleased with the effects resulting from the use of Ung't Resinol in cases of Itching Piles, Pruritus Ani, and Vulvae. Eczema, Erysipelas, &c. In fact it is the remedy "par excellence" in all cases where there is a Congested or Hyperaemic condition of the capillary Blood Vessels. C. D. Smith, M.D., Atlanta, Ga.

I frequently prescribe Resinol, and am well pleased with its work. It has proved very useful in many forms of eruption of the skin, and especially so in Pruritus Vulvæ or Ani, and in Eczema of other parts of the body.

Lucy Hall Brown, M.D., Brooklyn, N. Y.

I take pleasure in stating that I have found Unguentum Resinol almost a specific for Pruritus Ani, Itching Piles and Marginal Eczema.

Henry Hug, M.D., Detroit, Mich.

Resinol is a harmless antiseptic and a true skin anæsthetic, absolutely non-irritant and non toxic (free from lead, mercury, or cocaine), can be applied to mucous, excoriated or denuded surfaces of any extent at any age without fear of untoward results, and is not contra-indicated by any internal medication that may be deemed advisable.

Resinol is put up in *one ounce* jars at 50 cts. each, and can be obtained at any drug store.
Sample sent **free** on application, or **one** regular size jar for trial on receipt of 25 cents.

RESINOL CHEMICAL CO., Baltimore, Md.

Uterine Drainage in Pelvis Inflammation.

Dr Kime, in the Southern Medical Record, recommends darinage tube in the uterus to prevent and relieve pelvic inflammation. His conclusions are as follows;

1. A uterine tampon is not a true drain, and even obstructs drainage in many cases.

2. Capillary drainage is secured by carrying a strip of gauze up into the cavity, not packing it, and then it drains for a few hours only,

3. Gauze cannot act even as a capillary drain when either end or center is constricted or when coated with mucus.

4. Gauze when saturated with serum, unless it contains an antiseptic, forms a hot bed for germ development.

5. Never tampon the uterus in puerperal septic infection except to check hemorrage.

6. The good effect of gauze tampon in cases of endometritis and after abortion is not due to drainage, but to its effects as tampon—i. e., checking hemorrhage, stimulating uterine contraction, prolonging medication of the endometrium, and acting as a surgical dressing.

7. The uterine drainage tube is the most essential factor in the treatment of puerperal nfection and the best method of securing drainage when demanded in other diseased conditions of the uterus.

8. It will save more lives, relieve and prevent more pelvic complications than any one factor at our command.

Non-Descriptied.

The practitioner frequently comes in contact with women whose ailment is non-descriptive; they are depressed, have forebodings, and feel that their entire system is out of order, nerves completely unstrung, pains, aches, and a general feeling of lassitude and debility. The physician being unable to perceive any positive symptoms indicating other than a normal condition, although he recognizes something must be done to satisfy his patient until he is able to locate the cause. In such non-descriptive cases Dioviburnia combined with Neurosine will usually, after a week or ten days, give entire relief.

R Neurosine ..... ℥ii
Dioviburnia ..... ℥iv
M. Sig.—Tablespoonful in wineglass of water every three hours.

There can be no detrimental after-effects, as neither of these products contain any Opium or other deleterious drugs.

Chronic Diphtheria.

In some rare cases, according to Dr. Jessen, the clinical manifestations of diphtheritic process in the upper air passages persist for a long time. There are but few reported cases of chronic diphtheria. The author records the following case in a girl, aged 19, who first fell ill with a facial erysipelas. Thii soon got well, but a few days latter an ulcerated patch appeared on the right side of the palate, The glands were enlarged,and the temperature was 103.1 deg. F. Virulent diphtheria bacilli were found in the exudation. In the further progress of the case exudation appeared on the posterior pharyngeal wall, and in the nasopharynx and right nostril, but there were no fever and no albuminuria. Four weeks after the onset there was a definite paresis of the right half of the soft palate. The exudation varied its position, but as time went on its inteneity diminished. Virulent diphtheria bacilli were constantly found in the exudation. An injection of 1,500 units of diphtheria serum had no effect on the lesion, and the same was true of local treatment with all the ordinary applications. Lactic acid destroyed the exudation rapidly, but it formed again. Four month after the onset there was an infiltration of the mucous membrane where the exudation had been, and there were still several white patches in the pharynx not easily detached. The exudation was fibrino-purulent in character, and contained diphtheria bacilli. It is interesting to note that notwithstanding the presence during four months of a local lesion containing virulent diphtheria bacilli, there were practically no general symptoms. Some five months after the onset the exudation disappearid, and the infiltration of the mucous membrane to diminish.

Modern Views on Matrimonial Sterility.

Dr. H. O. Pantzer suggests that many clinical observations and theoretical considerations favor the view that the function of ovulation precedes the primary occurrence of menstruation some time, and may continue for some years after menstruation has ceased, He states, in the Annals of Gyn. and Ped., that cases have been reported where conception has occurred before menstruation ever appeared, and also after menstruation had ceased for some time.

According to Cook, the girls of the Esquimaux marry and conceive when fourteen years old, and younger, whereas their menstruation first appears at the age of nineteen or twenty years.

Henson's observations, based on 248 cases, show that conception occurs in greatest frequency immediately following menstruation; that conception before a flow is a rare event.

Very early and late marriages are prone to be sterile- Fright, fear, and other preoccupied conditions of the psychei are impediments to conception; so, also, are frigidity, dispareunia, adiposity, general debility, alcoholism, and tuberculosis; all these influences acting, probably by inducing defective local circulation, and, consequently, modifying ovulation and menstruation.

Jolts sustained in early life may give rise to disylacements and subsequent conditions which materially interfere later with the correct development and function of the genital organs.

Excluding the comparatively few cases of congenital sexual malformations, which absolutely preclude fecundation, sterility must now be regarded as essentially an acquired condition, and in some measure remediable.

The destructive role that gonorrhœal disease plays in the production of sterility, as first pointed out by Noeggerath, in 1872, is well established.

In determining the capability of the male, therefore, it becomes necessary to examine his discharges for living spermatozoa, azoospermia being present and the cause of matrimonial sterility in fully fifty per cent. of the cases, according to Graefe.

Is the Vagina in Normal Pregnancy Aseptic?

Goenner has carefully investigated the normal secretion of the vagina in healthy pregnant women.. He finds that it contains anaerobic bacteria, not such as cause primary septic endometritis, but those which can be easily introduced from without. As in the case of streptococci which set up puerperal fever, the germs in the vagina do not represent auto-infection, but are brought there by the medical attendant, the midwife, the nurse or the instruments. Septic endometritis, often indicated by fetid liquor amnii, may be excited by the bacterium coli.

Notwithstanding the large number of Hypophosphites on the market, it is quite difficult to obtain a uniform and reliable Syrup. "Robinson's" is a highly elegant preparation, and possesses an advantage over some others, in that it holds the various salts, including Iron, Quinine and Strychnine, etc., in perfect solution, and is not liable to the formation of fungous growths.

ALWAYS THE SAME.

A STANDARD OF ANTISEPTIC WORTH.

LISTERINE.

LISTERINE is to make and maintain surgical cleanliness in the antiseptic and prophylactic treatment and care of all parts of the human body.

LISTERINE is of accurately determined and uniform antiseptic power and of positive originality.

LISTERINE is kept in stock by all worthy pharmacists everywhere

LISTERINE is taken as the standard of antiseptic preparations: The imitators all say, "It is something like Listerine."

:o:

LAMBERT'S

LITHIATED HYDRANGEA.

A valuable Renal Alterative and Anti-Lithic agent of marked service in the treatment of Cystitis, Gout, Rheumatism, and diseases of the Uric Diathesis generally.

DESCRIPTIVE LITERATUE UPON APPLICATION.

LAMBERT PHARMACAL CO., ST. LOUIS.

The Treatment of Rheumatoid and Gouty Affections by Colchi Sal.

Rheumatism may be divided for convenience into the following classifications:

I. Acute Rheumatism or Rheumatic Fever.

II. Subacute Rheumatism.

III. Muscular Rheumatism.

IV. Chronic Rheumatism.

In Rheumatic Fever the prodrome is very short usually of a few days, commencing with an aching feeling in larger joints such as the shoulder, hip, elbow, knee, ankle or wrist, making locomotion very difficult or even impossible. The inflammation having a tendency to be of a flying character, first in one joint then in another, mostly the ffrst symptom is fever, not so high in the start, but becoming more so as the increase in the joint involvement develops. Pulse is rapid and intense sweating follows, decided acid in reaction. Urine is usually scanty, high colored, acid reaction with decided sediment, mostly of urates. Subacute Rheumatism often follows the acute and will cause the patient much suffering, the symptoms continuing not so severe nor the fever quite so high. Cardiac complications often occur at this period.

Muscular Rheumatism comes on very suddenly, often within a few hours, mostly without any fever at all, and little or no swelling of the muscles. Its involvement is exclusively the muscles.

The Lumbar Muscles causing what is known as Lumbago or "Kink in the Back."

The Intercostal Muscles causing pleurodynia.

The Pectoral Muscles, Serratus and the Sterno Mastoid Muscles causing torticollis or stiff neck.

The Temporal and Masseter Muscles becoming affected, making mastication very painful. The abdominal muscles also occasionally become involved. This form of Rheumatism is usually of short duration.

Chronic Rheumatism is a chronic inflammation of the soft tissues of the joints, its prominent symptoms are stiffness, pain and often marked tenderness with enlargement, always much worse in damp and cool weather and better when dry and warm.

Gout and Podagra being both an acute and chronic constitutional affection is admitted in general that it is caused by an excess or increased accumulation of Uric Acid in the blood, causing Arthritis which is a distinctive sign, and is mostly inherited, but is also acquired.

In the treatment of Rheumatism and Gout the following essential points must be observed:

I. The elimination of such morbid secretions that cause the ailment.

II. Administration of a remedy to allay the pain and soothe the inflammation in order that the patient may get the necessary rest and sleep.

III. Care must be taken to stimulate the vital functions so as to prevent the excessive weakness that follows the effects of both these complaints, especially in Gout two things are necessary, knowing its cause first to give such medication as will promote the solution and elimination of Uric Acid, and secondly, to give the patient only such food as is productive of the minimum amount of Uric Acid. Colchicine certainly of late has gained its laurels as being of the greatest value although the plant from which this alkaloid is derived has been for a long time a recognized remedy in the treatment of Rheumatic and Podagric conditions, as it possesses pronounced diuretic, alterative and remarkable sedative action. It is certainly indicated when rapid wasting of tissue and prompt elimination of the products are required; it relieves the pain, diminishes the swelling and shortens the duration of an attack. There is no longer a doubt that this drug causes a marked increase of the elimination of both Urea and Uric Acid in the Urine, and where these are intermingled in the blood causes a separation of the same from it, which is of great importance.

In the Colchi Sal we have a solution of Colchicine in the natural Salicylate of Methyl, each capsule containing one-fourth of a millegramme of chemically pure Colchicine in 20 centigrammes of Salicylate of Methyl. The natural Salicylate of Methyl obtained from Betulena Lenta (Nat. Ord. Armentacial) gives relief where other salicylates have failed, and it is absolutely free from danger, not having the irritating effect upon the digestive tract so common with other salicylates. For over a year I have been using the Colchi Sal capsules in the treatment of all Rheumatoid and Gouty conditions, and in not one instance has it been necessary to use any other medicine to aid in curing same.

In marked inflammatory conditions I gave one capsule every hour for eight doses, then one every two hours until twenty capsules had been taken, after this the capsules were continued one every four hours until a cure was effected. Especially in cases of marked inflammation character it was almost beyond belief to note how quickly these capsules relieved and checked the inflammation which to the patient was a great blessing to be relieved of such terrible suffering.

The following rules are essential: Rest

in bed if possible, or placed in a comfortable position; patient should be dressed in flannel undergarments to encourage absorption of perspiration; affected joints should be protected with flannel rollers or cotton batting. Elevation of extremities usually relieves somewhat. Regarding diet, same should be nourishing and at the same time easily digested. All kinds of fish, raw oysters and raw clams, green and succulent vegetables, such as spinach, celery, salads, cresses, peas, summer cabbage, radishes and horse radish, milk puddings, acid fruits, old cheese, mineral waters, buttermilk, cocoa shells, milk with lime juice. Care must be taken to avoid such foods as contain nitrogenous or albuminous principles, as these in combustion result in Urea and in complete Uric Acid.

Alcoholic drinks are contra-indicated. Bowels should be kept open and the kidneys in good working order. With these two active ingredients, Colchicine and Methyl Salicylate, we have a specific for the treatment of Rheumatism and Gout, and I am convinced that if our medical brethren will give same a thorough trial, with the proper dosage, that they will bear me out in the assertions made.

E. C. Scholer, M. D., Ph.G.

High Altitudes in Laryngeal Tuberculosis.

Dr. G. Derscheid, according to the editor of "Treatment," classifies 270 laryngeal cases. 144 cases of laryngeal tuberculosis have been actually cured; 12 are still under treatment, but are progressing towards cure. One case, in which no pulmonary disease could be detected, appeared to be a case of primary tuberculosis of the larynx, and was cured. In all, 157 cases (= 59% of the total) can be considered as already cured, or nearly cured, of their laryngeal tuberculosis; 32 cases improved; 63 cases (= 23.6 per cent.) were bad cases from the commencement, and included patients who, besides their tubercular affection, suffered from cardiac disease, nephritis, severe diabetes, etc. 14 cases showed signs of healed laryngeal tuberculosis, and continued in good condition. In four cases the diagnosis of laryngeal tuberculosis was uncertain. Derscheid concludes that high altitudes are not contraindicated for many cases of phthisis with laryngeal complications. Though (especially during the period of acclimatisation) the dryness of the air may cause pharyngeal irritability in some patients, the climate is likely to act favourably on laryngeal tuberculosis in the same way as it does on the pulmonary disease, notably by opposing the baneful action of pyogenic microbes, which play a prominent part in tuberculous ulcerations of the larynx, similar to that which they play in the pulmonary lesions. Derscheid holds that laryngeal tuberculosis is no more a contraindication for treatment in high altitudes than is a tendency to hæmoptysis, which formerly was likewise regarded as a contraindication. Needless to say, local treatment must be employed when necessary for the laryngeal trouble in high altitudes, just as in low ones. It is interesting to note that according to Derscheid the proportion of phthisical patients in which laryngeal complications are present, seems to be about 14.7 per cent., and he believes that laryngeal tuberculosis, like pulmonary tuberculosis, is sometimes cured "spontaneously," without any special treatment at all. The contraindications, according to him, for high altitudes in laryngeal cases are: (1) Advanced cases, which are usually accompanied by advanced lung disease; (2) laryngeal phthisis, even slight cases, when occurring in too feeble patients; such cases are better suited to warm climates; (3) "erethic" cases, showing excessive laryngeal irritability; (4) general contraindications, which apply to all cases of phthisis, such as advanced cardiac valvular disease, epilepsy, nephritis, pernicious anæmia, severe pulmonary emphysema, etc.

Aseptolin.

Dr. Morris, of Denver, Colo., in a letter to the Medical World of Philadelphia, speaks of a case that confirms Dr. Osler's views in regard to Toxemia; that of a lady 65 years old, suffering from pneumonia, and finally pronounced a hopeless case. Dr. Morris administered Aseptolin-Edson and says in conclusion "She made a slow but perfect recovery. The case confirms in my mind the fact that we haue toxemia to contend with in pneumonia, and that Aseptolin is an antidote. Last Fall every case of typhoid fever I had began to improve as soon as I gave them Edson's Aseptolin.

I would further state that in every case of diphtheria—pronounced true diphtheria by the health department—the patients have commenced to improve immediately upon the injection of Aseptolin, although they were growing worse and the deposit spreading up to the time of its use.

We have a good chance to study consumption in this Western country, and I must say for the Edson treatment that it has cured and relieved more cases than all other treatments combined."

Cancer a Contagious Disease.

Dr. Leon Noel, according to the British Medical Journal, has collected a large amount of information on this subject, more particularly in support of the idea that the origin of cancer should be sought for in some widely spread condition affecting very various organisms both animal and vegetable. This idea, originated by Fiessinger, is based first of all upon the fact that cancer seems to be most frequent in isolated houses on the banks of rivers, especially if close to woods. It has also been observed that trees under these same conditions are affected with veritable tumors which present a curious resemblance to cancer. Among other facts cited by Noel is one which goes to show a certain relation between arboreal "cancer" and that of man; that is not only the frequency of malignant tumors in habitations surrounded by or near woods, but also a considerable mortality from cancer among certain persons whose occupation obliges them to live in these conditions; thus Excise officers who in certain parts of the country pass a considerable portion of their time in isolated paths through woods have frequently been observed to suffer from cancer. The statistics of Julliard, Bierry, and Fiessinger all contain considerable numbers of Excise men, and it is now a known fact that country laborers are very predisposed to cancer, and traumatism, scratches from brushes, etc., have been thought to have considerable bearing on the etiology of cancer. Cancer of the lip is said not to exist at Lyons, and all those who go into hospital there to be operated on for growth in that situation come from the fields. The malignant vegetable tumor is found in woods and orchards. This tumor appears to be contagious, a good number of them often found in the same neighborhood. Insects, as shown experimentally by Morau, more particularly the large wasps found in woods, seem to have a certain predilection for arboreal "cancer." Not only do they carry infective material from one tree to another, but they also disseminate it into human food. Ruffer's observation is quoted that large numbers of protozoa live on insects in the form of saprophytes, and it is quite easy to understand how insects could carry any infective material, and the question is asked: Is it possible for a human being to develop cancer as the result of such infection? It is also easy to understand how water, especially in the neighborhood of woods, could act as the medium of transport. In point of fact Fiessinger speaks of two different methods in which cancer may be propagated—from food and by the fingers. In the one case cancer of the alimentary tract will result; in the other any external portion of the body may be affected. Although these questions are merely hypothetical, they merit further observation.

Palliative and Operative Treatment of Fistula-in-ano.

Dr. John Blake, in the Boston Med. and Surg. Journal, discusses this subject. He says:

Treatment is divided into operative and non-operative. The latter is classed under one of the following heads: (1) Simple cleanliness. (2) Dilatation of external opening and packing with gauze. (3) Application of caustics. (4) Treatment by ligature.

Of these no doubt the elastic ligature is the most successful, but even this is only suited for a simple straight sinus. As for caustics, amongst which the author prefers 95 per cent. solution of carbolic acid, they are at best most uncertain, and should be restricted in use to high-lying sinuses extending above the internal opening and running up by the side of the gut outside the internal sphincter, for in these cases the division of the sinus would entail division of the internal sphincter with possible, if not probalbe, incontinence as a result. In this way caustic injections may be of use as an adjunct to operative measures. Packing is rarely of any use, and usually is merely a waste of time. The first method, viz., "simple cleanliness," is merely leaving the cure to nature. No doubt nature succeeds in effecting a cure in rare instances, bnt more often the cure is only temporary, and the fistula breaks down again after the lapse of months.

Of the operative measures recommended, viz., incision with packing and excision with immediate suture, the former is more generally applicable, and is the method usually adopted almost to the exclusion of every other, though in certain cases, more especially those in which the sinuses are deep, extending through or under the gluteus muscle, and tracking for some distance away from the anus, a modification of excision may be carried out with a view to union by first intention.

The author lays great stress upon the necessity of care in the after-treatment. Surgeons may err quite as much in a too vigorous packing or plugging, as it is often called, of the wounds, as in a total neglect of them.

6

HYDROZONE

(30 volumes preserved aqueous solution of H_2O_2)

IS THE MOST POWERFUL ANTISEPTIC AND PUS DESTROYER. HARMLESS STIMULANT TO HEALTHY GRANULATIONS.

GLYCOZONE

(C. P. Glycerine combined with Ozone)

IS THE MOST POWERFUL HEALING AGENT KNOWN.

These Remedies cure all Diseases caused by Germs.

Successfully used in the treatment of Chronic and Acute Ulcers (Specific or not),

Skin Diseases, Eczema, Psoriasis, Salt Rheum, Itch, Barber's Itch, Poisoning Ivy, Acne, Etc.

Hydrozone, applied to any open diseased surface, destroys the pus leaving the tissues beneath in a healthy condition. Then **Glycozone,** being applied to the clean surface, stimulates healthy granulations and heals the sore.

Inflammatory and Purulent Diseases of the Ear. Otitis Media, Etc.

By means of a glass syringe, inject **Hydrozone,** either full strength or diluted, and complete the dressing with a small roll of cotton well impregnated with **Glycozone.**

Send for free 240-page book "Treatment of Diseases caused by Germs," containing reprints of 120 scientific articles by leading contributors to medical literature.

Physicians remitting 50 cents will receive one complimentary sample of each "Hydrozone" and Glycozone" by express, charges prepaid.

Hydrozone is put up only in extra small, small, medium, and large size bottles, bearing a red label, white letters, gold and blue border with my signature.

Glycozone is put up only in 4-oz., 8-oz. and 16-oz. bottles, bearing a yellow label, white and black letters, red and blue border with my signature.

Marchand's Eye Balsam cures all inflammatory and contagious diseases of the eyes.

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Sold by leading Druggists. Avoid imitations. ☞ Mention this Publication.

Gonorrheal Iritis.

Dr. David DeBeck, in the Ohio Medical Journal, states that the occurrence of an iritis, due to gonorrhea, has long been, and is still, somewhat of a mooted question. While many authorities recognize this affection. others will not allow the existence of an irritis, except in connection with an accompanying rheumatism. Dr. Seely has reported two cases that seem to clearly come under this head.

The first case was in a man with gonorrhea, in the service of Prof. Conner, at the Good Samaritan Hospital in 1875. He had a typical iritis of mixed plastic and serous type, for which absolutely no cause existed, other than the gonorrhea.

The second case was reported to the Cincinnati Academy of Medicine, at the meeting of December 18, 1882. The case had been seen by Prof. Ranrohoff, who diagnosed correctly an episcleritis. The man had neither syphilis nor rheumatism.

Under treatment the ocular condition subsided in ten days or two weeks, the sclera becoming white.

About this time there was a sudden attack of pain in the eyes during the night. The next day there was found intense inflammation of the iris in each eye. The sclera and bulbar conjunctiva were intensely injected. There were three or four small congested or ecchymotic patches upon each iris. The pupils were contracted. Pain intense.

Leeches were applied, atropine instilled, and opium administered. The next day the pupils became circular, and the third day they were fully dilated, with no attachments.

The patient had several relapses, during which the inflammation would become again exaggerated, and the eyeball intensely congested. These relapses occurred every few days, until the patient entirely recovered, in about two months.

There seems to be no distinct reason why iritis should not occur in a case of gonorrhea. One well-known complication of gonorrhea is the acute arthritis, especially prone to affect the knee joint. (The name gonorrheal "rheumatism" is not well chosen). This is probably due to toxic products entering the general circulation. These products may select the iris, as well as the linings of the joints, causing, on the one hand, an iritis, in the other case an arthritis. The local conditions seem to be favorably opposed to this general contamination taking place, except in rare instances; for this reason the arthritis is very rare, and the iritis extremely so.

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A Happy Thought.

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The Charlotte Medical Journal.

Vol. XI. CHARLOTTE, N. C., DECEMBER, 1897. No. 6.

A Clinical Record of Two Cases of Meniere's Disease, with Remarks Thereon.*

By John Hey Williams, M. D., Surgeon General, Asheville, N. C.

In 1861 Paul Meniere gave to the Academy of Medicine, of Paris, a clinical paper in which he described a certain group of symptoms of more or less severity which he ascribed to disease, or disturbance of the Labyrinth. Since the production of that paper the attention of the aurist and the alienist as well has been especially directed to the study of the complex group of symptoms which have been aggregated under the generic title of Meniere's disease. It is not my intention to attempt a treatise upon Labyrinthian vertigo, as it is far too large a subject to cover in a single paper. This paper is simply to set forth a series of clinical observations of two cases of traumatic injury to the middle ear with marked exemplification of all the cerebral symptoms accompanied by a gradual and finally total loss of hearing in the ear affected. Prior to the production of Meniere's paper certain of the clinical features, as presented by him had been noted by other observers, but to Meniere alone belongs the credit of grouping the entirety of the symptoms in such a lucid manner that by common consent his name was given to this peculiar affection. Other and later observers were inclined to dispute the deductions of Meniere, but he was able to show, however, by a series of post mortem examinations that the semicircular canals alone were involved and that no trace of disease could be found in other parts of the ear or adjacent portion of the brain and meninges. It is possible that certain of the phenomena presented can be caused by varying pressure of the cerebro-spinal fluid conveyed through the cochlear aqueduct and probably account for the sudden and immediate appearance of vertigo when the labyrinth is injured through the tympanic membrane. In true idiopathic "Meniere" the vertigo, while a distressing feature is not the only one.

Ferriere makes it quite plain that the means by which we preserve our equilibrium involves afferent nerves, co-ordinate centres, and efferent nerves to the muscles which aid us in preserving a steady, upright position. Loss of the tactile sense or of the compound impression called muscular sense result in a disturbance of equilibrium as may be seen in an advanced case of "tabes dorsalis," but not in vertigo which is something more than this.

Certain parts of the ear have the larger share in enabling us to maintain our equilibrium and this function, it is generally conceded, is dominated by the perceptive nerves of the semicircular canals. These canals lie deep within the petrous portion of the temporal bones and are apparently secure from outside assaults. This however is not so, as will be shown by the recital of the two cases whose clinical record I have to show you. These canals may have slight or no relation to the sense of hearing.

Various attempts heve been made to explain the mechanism of their function. It may depend upon the varying pressure relation of the Endo lymph to the nerve ends which lie in the membranous canals. I disclaim, as I before stated, to offer any remarks upon the common form of aural vertigo and disturbances which may come from slight inflammatory, or other disturbances of the internal ear, or to outside disturbances of the ganglionic system of nerves, but to the graver form, as exemplified in the two cases I shall now relate to you.

Case 1.—A. G. H., age 50; full habit, active, vigorous, no previous history of vertigo. Nov. 26, 1891, while deer hunting, was riding behind another gentleman. Passing under a low overhanging limb the gentleman in front pushed it aside, holding it till he had passed and let it swing back. The limb swung violently against the right side of the patient's head and a small twig neatly entered the meatus doing no damage whatever there, but struck the membrane slightly below the centre. It made a V shaped rupture and drove in the handle of the malleus forcing it, upward and inward. As the patient expresses it the whole world swung round, and only by clinging to the pommel of the saddle could he ride to an open space where he could alight. Intense and persistent nausea soon came on which he compared to sea sickness or the nausea produced by swinging in a large swing, and there was absolute loss of perception of

*Read before the Buncombe County Medical Society, Oct. 18, 1897.

direction of sound. Lying quietly on the affected side gave the most relief. He was conveyed in a carriage to Asheville, where I saw him November 28th.

Examination with head mirror and strong reflected light showed meatus filled with dried blood which was removed with some difficulty. On reaching the membrane I found a rugged triangular opening, apex downward. The triangular flap to which the handle of the malleus was attached was pushed inward and upward. The fragments of the membrane were highly congested, with edges everted. Pushing the handle of the malleus inward aggravated the nausea very much, producing a severe vomiting attack. With an iris hook, slightly curved, I was able to hook down the handle, and traction upon it gave marked relief from the vertigo. The patient was unable to walk without assistance and constantly inclined to the affected side; preferred resting in a recumbent position. So long as he inclined to the affected side the vertigo was markedly less, but any inclination toward the opposite side brought on the vertigo with renewed intensity, so much so that he would involuntarily catch at the bed with the expression that the "damned house was turning over again." As he expressed it he felt that he was glued up to the ceiling and was looking down at the floor, and that the laws of gravity had been entirely reversed. There was no appreciable rise of temperature. There was slight pain in the affected side with a considerable degree of insomnia. Hearing, contact only, except for loud sounds.

The treatment consisted in syringing out the ear with warm carbolized water and the instillation of warm fluid vaseline with Iodoform.

For the purpose of relieving the moderate amount of pain and especially to control the insomnia I gave a capsule of Phenacetin 5 grains, Ext. Hyoscyamus ¼ grain, Ext. Cannabis Ind. ¼ grain. To my intense gratification I found the remedy to have an immediate effect in lessening the vertigo and nausea. The medicine was ordered every four hours. December 1st, patient was able to sit in chair without "turning over" and on December 29th was able to walk across the floor by fixing his eyes on some stable object. December 31st he was discharged from close observation. During this time however he had several attacks of the vertigo, apparently caused by overindulgence at the table. Always promptly relieved by a brisk saline, and more frequent doses of the phenacetine compound. At this present writing the deafness has become absolute; rarely ever has vertigo except when turning suddenly toward the unaffected side; passes away when standing perfectly quiet and fastening the eyes on some fixed object. He has a sense of a humming noise like the drumming of a rotary fan outside of and above the head; can stand perfectly still with the eyes closed but cannot walk in a straight line, turning to the affected side. A slight cold in the head, with any degree of stuffiness in the Eustachian tubes produces some vertigo—relieved as before by phenacetine.

Case 2.—John B., age 28, carpenter, unmarried; Aug. 25, 1893, was nailing down flooring in a kneeling posture; his assistant who was driving nails also about ten feet from him and on his right, struck a nail carelessly and it flew from under the hammer toward the patient, The end of the nail struck the tragus lacerating it and partially checking the blow. It further lacerated the posterior side of the meatus, beginning about halfway down, and extending down to and through the membrane.

The man fell forward on his face, put his hand to his ear, pulled out the nail and fell over on the right side. When his assistant came to his aid and raised him up he had a sudden attack of nausea, vomiting freely. He would clutch hold of the man's knees and cry out that the house was turning over and that every time it turned over it made him sick. He was given stimulants and taken to his room where I saw him about a half hour afterwards. The ear was still bleeding but was soon checked by hot water syringing which gave him great relief. Inspection with mirror and speculum revealed a rent in the membrane from the lower posterior quadrant extending upward and forward entirely across the membrane. Starting from the end of the mamubrium was a second rent extending upward and backward, entirely bisecting the upper posterior quadrant. The manubrium was depressed and tilted upwards as in case one, with a further inclination forward than normal. Traction upon the manubrium had no further effect than cause intense pain. The entire ear was lightly dusted with morphine and Iodoform and iodoform oil dressing applied. Remembering case one I ordered also the phenacetine compound which acted as happily as before, giving rest and comparative freedom from vertigo and nausea. When he stood erect he would turn toward the affected side, turning his eyes in the same direction and clutching hold of his supporters. Even when his eyes were closed he would turn in the same direction.

The progress of the case for the next six days was uneventful; a gradual lessening of the vertigo and nausea and increasing

ability to preserve the equilibrium. On the tenth day he was able to walk out but would have to keep his eyes fixed on some stable point. A sudden rotatory motion of the head would produce immediate vertigo and nausea. The hearing in the ear was partially restored after the second day, patient claiming to hear a 30 watch at two inches. This however gradually became less, and when last seen could not be heard on contact—no observation with tuning fork.

About six months after receipt of injury the patient left here going to Tennessee and passed from under my observation. He had to give up his occupation as house builder being unable to trust himself more than a few feet from the ground. Previous to the injury he had been rather intemperate but the accident made a teetotaler of him, a single drink of spirit, as he put it, would "stand him on his head." The noise in the head was confined to a single note which he says, to be isotonal with the bell on the colored church on Catholic hill.

In commenting upon the above cases it was claimed that such cases are not Meniere and that true Meniere is due to disease originating in the bony canals themselves or in the membrane lining them. The objection to my view is incorrect. I claim that any disturbance or traumatism, whether disease from within or violence from without, which will produce all the classical symptoms of Meniere gives us true Meniere. The remarkable similarity of the cases, with the marked phenomena presented has induced me to make this report, trusting that you will find it worthy of your consideration.

Observations on Typho-Malarial Fever.

By J. Hamilton Browning, M. D., Charlottesville, Va

My object is not to elicit any discussion as to the nomenclature, or to affirm any germ or germs, or their hybrid, is the causative factor of this malady, for that has been discussed, *ad nauseam*. Most clinical observers admit in a malarial section there is a disease that is not true typhoid or malarial, yet it has many elements in common with typhoid and many which ally it to remittent fever, hence it is called typho-malarial or malarial typhoid, placing the accent on the predominating element, which is ingenious and comprehensive enough until we know more of the cause and its action.

My object is to call attention to the prevalence of this disease in a certain part of a given locality, as observed by me while located at Romeo, Illinois. Therefore I think a general description of the topography of that section may prove interesting. At that point the valley is about one mile wide, soil "glacial drift" varying in depth from one to three feet, underlaid by solid limestone rock as shown by the Drainage Canal which is thirty-six feet deep at that point The Desplaines river, which traverses this valley, fluctuates widely, (having no constant fountain supply) during some seasons its whole discharge would pass through a six-inch pipe, while at others its volume reaches 800,000 cubic feet per minute and floods the entire valley.

In this valley, within a radius of a mile, were erected camps just above high water mark, on mounds, for about 800 men. These camps were under my immediate supervision and subject to the rules and regulations of the sanitary district of Chicago, and enforced when requested by the police of the sanitary district, while within a few hundred yards of my office a number of houses were erected by private individuals for rent to the laboring men, and consequently not subject to the sanitary rules.

The water supply of the camps was obtained from drilled wells and the ground elevated to a point above high water mark, while the water supply of the private houses was obtained from the Desplaines river, or wells subject to overflow by the river. Malaria, in its various forms, flourished, few escaping the intermittent type, which, however, was very amenable to the general accepted treatment; and many had remittent, yet only three cases of typhoid, and about half a dozen cases of typho-malaria appeared in the camp limits; while in the private houses, which at no time gave accommodation to more than 20 per cent. of the men, I attended during two years over sixty cases of typho-malaria, and ten cases of uncomplicated typhoid. Thus it is evident that the water supply was the source of the trouble.

The clinical history of typho-malaria presents two types according as the typhoid or the malarial element predominates during the first week:

Malarial Typhoid. On morning of day illness begins the man is in apparent health. About 11 a. m. he has a chill lasting usually about half an hour, followed by high fever, 105–106 F., profuse perspiration, vomiting, headache, pain in entire body, most acute in lumbar region and nape of neck—usually constipated. The following morning patient often expresses a desire to return to work—complaining only of pain

in back, soreness general, fever about 100 F. On third day, usually an hour earlier, chill returns, followed by usual train of symptoms, with addition of complete anorexia, the fever not reaching normal in the afternoon. Consant pain in head and back are most distressing symptoms and may last for four or five days. From this stage the man is unable to work but insists on not keeping his bed during entire day—chills now often occur every day; by eighth or tenth day chills often disappear, temperature drops to 102–3 in evening, morning 101–2, but subject to sudden exacerbations and profuse sweating without apparent discomfort to patient. Patient gradually grows weaker, tongue has thick coating, skin dry and hot, slight tympanitis, gurgling in right iliac region, diarrhœa alternating with constipation, mind usually clear, may wander at times, sleeps often, restless. Patients seldom become helpless, usually able to take medicine and food without constant care of a nurse. Convalescence usually established in about three weeks.

Second Type—*Typho*-Malarial. Onset gradual; for several days patient complains of being weak, easily fatigued, loss of appetite, slight fever and headache in afternoon, tongue coated, breath offensive, bowels not regular, usually diarrhœa. By end of fourth or sixth day chill occurs usually in afternoon with usual train of symptoms, and sometimes recur daily for about a week. Fever usually 104–6 during exacerbation—during remission 101–3 F. Profuse sweating often continues to recur after chills have ceased every time patient goes to sleep and are annoying and exhausting and not amenable to treatment. Third week usually markedly typhoid, except pulse is stronger and temperature subject to greater variation. Tongue has dark brown coat, sordies on teeth. Tympanitis not pronounced, tenderness in right iliac region, marked delirium seldom present, often flighty in afternoon and at night but will answer questions intelligently, great loss of flesh and strength. Complications and sequelæ not as common as in uncomplicated typhoid (I have only observed one case of intestinal perforation—that during fourth week when convalescence was marked—as the result of an old woman giving patient three C. C. pills followed in three hours by tablespoonful of sulphate magnesia, which closed a scene of agony in twenty-four hours.) End of fourth week morning temperature usually normal and convalescence well established. At this stage I have several times been startled by an urgent message to see my patient at once, and alarmed when I arrived to find the patient had had a severe chill, temperature ran up to 105–6, violent headache and restlessness, but, fortunate for all concerned the severe pain was in the lumbar and not in the hypogastric region. Morphine hypodermically, followed for next few days by twenty to thirty grains of quinine, usually brings the case to a favorable termination without further complications.

The typhoid element in the so-called typho-malarial fever is usually easily made out by the history of case, symptoms, general condition of patient and presence of uncomplicated typhoid in the same locality, and is not easily confounded with typhoid condition of remittent fever. A disease as grave as typhoid fever, complicated by one as debilitating as malaria, yet showing a mortality far less than uncomplicated typhoid naturally suggests the question so often asked, "What is typho-malaria? (I do not presume to answer.)

But it seems evident to me if typhoid fever is present, it can, and often will, bring out the malarial element which results in a condition much to be preferred to uncomplicated typhoid fever; and judging by analogy the best reason to offer that we have at present—it is not a simple complication. For in a malarial section lowering of general vitality from injuries, amputations, child-birth, or general or local diseases often causes a manifestation of malaria that has been lying dormant in the system, and the gravity of the existing malady is intensified accordingly; whereas in typho-malarial fever if it is ushered in by marked malarial symptoms the disease usually runs a shorter and milder course, and on the other hand if the typhoid septic element predominates in first week and malaria doesn't make its appearance until beginning of the second week the disease usually runs a longer and severer course, but malaria is not intensified as vital powers are lowered, in fact, is seldom seen in third week.

Further, if the malarial parasite is present it is so changed by the septic elements present, that it is seldom if ever recognised under microscope,

Thus it seems to me, regardless of the correctness of either of the theories as to its production:

First, that it is a hybrid, and

Second that both the typhoid bacilli of Eberth and the plasmodium malariæ of Laveran are present, but are either antagonistic to each other, or else restraining, one the activity of the other; that the conditions presented invite us to direct our investigations toward the field of serum-therapy rather than towards intestinal anti-

sepsis in our endeavor to master typhoid fever.

In the treatment of typho-malarial fever quinine was the principal drug used by me, but was far from being as useful as in uncomplicated malaria. In some cases it was pushed to the point of cinchonism, which I think did more harm than good. In other cases two grains were given every two or three hours; while in still other cases it was only used during active manifestations of the malaria, the treatment being that of typhoid. Baths occasionally, acetanilide, given when marked periodicity for headache; in a word, treated symptomatically, which I think is the most satisfactory. Calomel in early stage is of great value. The dietetic treatment should be that of typhoid fever.

The Relation of the Cause to the Immediate and Remote Results and Associated Lesions of Fractures.*

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Except in certain pathological or physiological conditions, the fracture of bone is always due to violence. Even in the former, more or less violence is usually necessary for the immediate cause. In all cases of fracture, the force of the violence must be greater than the textural cohesion of the bone structure. This cohesion differs in different bones, in different parts and axes of the same bone, and in different persons.

"The natural strength and mechanical capabilities of bone" are very important in discussing the cause of fracture, as to these are due the amount of resistance offered by bone to violence.

On this question Rauber and Messerer (Tillman's Surgery) have made some experiments, and have determined the "tensile," "compression" and "torsion" strength of bone, as follows:

"Tensile strength of the compact bone substance in a fresh state and during middle life is 9.25 to 12.21 kilograms per square millimetre, or about the same as that of *brass* and *iron*; the compressive strength, 12.56 to 16.8 kilograms per square millimetre, or double that of *wood*, *granite* or *lead*; the torsion strength 8 kilograms per square millimetre. The strength of the spongy bone substance is much less; that of the spongy portion of the femoral condyles being only 0.96 kilograms per square millimetre compression strength; of the bodies of the vertebræ 0.84; in old age only 0.22.

The tensile strength of the humerus, as a whole, according to Messerer, is 533, and of the femur 694 kilograms per square millimetre.

The compression strength in individual bones decreased in the following order: Tibia, femur, humerus, radius, ulna, clavicle, fibula. Compression through the longitudinal axis caused the tibia to fracture in its shaft at a pressure of 1,650 kilograms; the femur at 756; the radius, in men, at 333, and in women at 220. The resistance to bending is given for the femur at 400 kilograms in men, and 263 in women. The torsion elasticity amounts to about one-third of the bending elasticity; the femur giving away at 89 kilograms, and the clavicle at 8.

In the skull the average pressure required to produce a longitudinal fracture was 650 kilograms; to produce a transverse fracture, 520 kilograms. The base of the skull was the weakest in most instances. Transverse pressure caused a transverse fracture, and longitudinal pressure a longitudinal fracture. The average pressure acting through the vertebral column required to fracture the bone, was 270 kilograms. A pressure of 250 kilograms exerted in a sagittal direction on the pelvis generally caused symmetrical fracture of the os pubis; a transverse pressure of 180 kilograms exerted upon the crest of the ilium caused a diastasis of the sacro-iliac joint. In young persons the sternum could be driven back to the vertebral column without producing a fracture.

From these estimates, we learn that bone *as a whole* offers the greatest resistance to traction, next to compression, next to bending, and least of all to torsion violence. Practically, traction violence acting upon the bone as a whole, and without participation of the others, one or more, rarely effects a fracture. If, for example, the femur were put upon the stretch-traction, the bone being crooked would necessarily be subjected to "traction" only on its concave or posterior aspect, while its anterior would, at first, be "compressed." Again, *accidental violence*, for obvious reasons, is rarely applied as a traction force. Compression force may be applied longitudinally, transversely or obliquely. Longitudinally, by compression upon one end of the bone the other being fixed, or simultaneously upon both ends. One end of the bone may be fixed by resting upon another body-bone or external re-

* Read before the Tri-State Medical Society at Nashville.

sistance—or by its own inertia. Thus a falling rock upon the knee—the leg flexed at right angles to the thigh, might break the tibia, or fibula, or both, by longitudinal compression; or a sudden blow upon the flexed knee or elbow, might fracture the femur or humerus by compression violence. A fall upon the knee might break the femur by longitudinal compression.

Transversely by a force acting simultaneous in opposite directions in line with the transverse diameter, as where a limb is caught between cars moving in opposite directions, or between rollers or cogwheels, or by a force acting only on one end of a transverse diameter—the other being fixed, as in fracture of an arm or leg when caught between moving and still "bumper," or when run over by a wheel, the limb resting upon the ground or rail, etc., or by its own inertia, as when a femur or tibia is broken by a blow, the limb not being supported by a resting surface.

Obliquely by a force acting obliquely to the transverse and longitudiaal diameters.

Bending, like stretching, is a combination of traction and compression, but in a different order. In bending, the traction is on the convex, and the compression on the concave aspect of the bend—just the opposite of stretching. In bending the convexity and concavity increase until the bone can bend no more, and breaks—their positions being determined by the direction of the force; in stretching, they diminish in their normal positions. In bending, the extremities of the bone approach each other; in stretching, they move in opposite directions. Fracture by compression in the longitudinal axis is largely by bending. In this instance there is no fulcrum. Fracture by bending proper is upon the principle of a broken lever and pre-supposes a power, a fulcrum and resistance. The power may be at either end or in the middle. Thus a limb caught in the spokes of a wagon wheel and carried around until the foot meets with resistance, the power is in the middle, the fulcrum is at the foot, and the resistance is the weight of the body, etc., etc.

Fracture by torsion is a twisting of the bone. It pre-supposes one end of the bone fixed, and the other twisted upon its longitudinal axis, or the ends rotated simultaneously in opposite directions. The force may act upon either the distal or proximal end of the bone. Thus, if the foot or leg is caught and twisted or rotated, the body remaining still, the force is applied at the distal end; on the other hand, if the foot or leg is fixed, and the body rotated, the force is applied at the proximal end.

Compression, bending and torsion, then, separate, or in combination, are the means by which violence produces a fracture. Usually, there is a combination—the most frequent being longitudinal compression and bending; and transverse or oblique compression and torsion.

The object of this paper being to discuss the relation of that violence to the results and associated lesions of fracture, it might be well here to briefly allude to the lesions, both in the bone, and the soft parts in cases of fracture.

Bone being covered by soft parts, it is impossible to conceive of a complete fracture of the former without more or less injury to the latter. Again, bone often is closely related to important viscera; hence injury to these is of great importance—both as regards the results add associated lesions of fracture. *The first or primary lesions produced by violence sufficient to produce fracture, then, may be thus divided:*

1st. The lesion in the bone.

2d. The lesions in the surrounding soft parts from periosteum to skin.

3d. The lesions of adjacent viscera on joint.

All these consist of:

1. Lesions of continuity.

2. Lesions of contiguity or relation.

3. Lesions in situ, or injury without macroscopical interruption of continuity or contiguity.

As a result of these lesions, there are:

1. More or less hemorrhage or blood extravasation.

2. More or less tissue killed.

3. More or less disturbance of nutrition.

4. More or less disturbance of function, bone, muscle, nerve, etc.

5. A more or less fertile soil for the proliferation of (a) pathogenic bacteria, i. e., pyogenic cocci and of non-pathogenic fungi, i. e., the germs of putrefaction.

As a result of these lesions, there may be:

1. Extravasation of synovia, cerebro-spinal fluid, or the contents of viscera and cavities, resulting from,

2. The involvement of a joint or the injury of a viscera.

3. The presence of foreign bodies introduced from without, i. e., dirt, grit, grease, etc., or wood, metal, etc.

4. The invasion of pathogenic bacteria from without, through

(*a*) An open wound.

(*b*) An abrasion or slight cut.

(*c*) By pressure through unbroken skin and tissues.

(*d*) From within through the circulation.

To repair these lesions, there must be re-established sufficient functional activity in the parts to effect,

1st. The absorption of necrotic and degenerated tissues and extravasated fluid—blood, lymph, etc.

2d. The regeneration of tissue and the union of structures by a physiological fibrinous or productive inflammation.

These objects may be hindered or prevented by

1st. By excessive loss of tissue, or too great displacement of tissue.

2d. By excessive necrosis produced by the violence, which results in irreparable loss of tissue.

3d. By inefficient circulation, due to failure in arterial supply, failure in cappillary circulation, failure in the return flow in the veins; all of which may be due to lacerations of the vessels, injury to their coats, especially the intima, without laceration, pressure from altered relations of contiguity, thrombi, espeoially in cappillaries and veins, and pressure from extravasated and exudated materials.

4th. Pathological inflammation due to

(*a*) Excessive inflammatory reaction, or

(*b*) To the presence of pathogenic germs, usually the latter, and which may result in secondary necrosis, with or without putrefaction, or in a coagulative necrosis and subsequent liquefaction of tissue by the peptonizing influence of the bacteria—one or all producing so much destruction of tissue, old and new, as to hinder or make repair impossible.

The above are most of the constant in all and some of the possible conditions in many cases of fracture.

To ascertain which of these certain and possible conditions that exist in, or may subsequently exist in a case of fracture, is the object of the surgeon's inquiry.

The great question to be answered is: Are these lesions in this case, under these circumstances, capable of repair? In answering this important question, the surgeon must know,

1st. The *extent* of the lesions.

2d. The *condition* of the tissues as to vitality and nutrition; and

3d. The *presence* or *absence* of pathogenic germs, and if present, whether they can be destroyed or not.

Now, the object of this paper is to determine the part that the cause, the violence or source of the fracture plays in these important particulars, to-wit, the extent of lesion, the effect on tissue vitality and nutrition, and to bacterial infection.

The part it plays in the extent of lesions of continuity and contiguity in the majority of cases is perfectly plain; this is particularly true in cases of compound fracture, for they are exposed to the naked eye. The part it plays in the modification of vitality and nutrition is not so apparent, because these are matters of protoplasmic metabolism and blood supply—both of which may be seriously crippled *without* apparent lesion, subjective or objective symptoms. These belong to the lesions of the third class given above, or changes due to histological lesion or molecular disturbance—lesions and changes in tissue cells, small blood vessels and cappillaries. The part it plays in bacterial infection, in case of open wound, is also plain; but in subcutaneous lesions, is still more obscure.

As clinical facts recognized by every surgeon, we know that in many cases of fracture, simple and compound, in which there is much laceration of soft parts and comminution of bone, the result is good—both to life and limb—while in other cases, simple or compound, without such extensive laceration of soft parts and comminution of bone, there is great sloughing from primary necrosis—or necrosis due to the violence—often requiring amputation. We also know that the vast majority of simple, and most cases of compound fracture, not requiring amputation, and properly treated, that there is no bacterial infection, while in others, simple and compound, often with less apparent lesion, there is great pathological inflammation from bacterial infection—leading often to secondary necrosis, possibly putrefaction, requiring amputation, and often resulting, not only in the loss of the limb, but also in death to the patient, from sapremia, septicemia or pyemia, or a remoter death from lardaceous or waxy degeneration from long continued suppuration. These different results, treatment being in all appropriate, may often be explained by the constitutional condition of the patient, the presence of other diseases, etc., etc., but in many they are undoubtedly due chiefly to the nature of the violence causing the fracture.

The classical division of the causes of fracture into direct and indirect, bears directly upon this subject. In indirect violence, the lesion of bone and soft parts are both less extensive. The bone gives away at its weakest point, usually by a simple oblique break, without comminution and much splintering, and the only injury to the soft parts is produced by the broken, aseptic fragment of bone. There is no great bruising or contusion of tissues, therefore very little minute lesion or molecular disturbance. It may lacerate an important vessel or nerve, or wound an important internal organ, but there is no great laceration of tissue. If the fracture is compound the skin is punctured from within, and ››

to the extent of the size of the protruding fragment, which is usually hugged tightly by the elastic skin, thus shutting off infection. There is not much destruction of tissue, nor much laceration, and still less histological change, nor much extravasation of blood. Therefore, there is less need for regeneration and repair, and less absorption to be done, less disturbance to nutrition, less liability to bacterial infection and proliferation, owing to the activity of the tissue cells, circulation and phagocytes, etc. Of course, where there is one of the above possible conditions, implication of joint, cavity or wound of viscera—*these* may indepently modify the result. In fracture by direct violence we usually have the reverse of all these things. The fracture is at the site where the violence is applied. The soft parts *first* receive the force of violence. The force necessary to break a bone by direct violence, that is to say, by transverse compression, is very great. Associated with it, it is true, may be torsion, in which case *less* violence will fracture the bone. Whether there are apparent lesions of continuity or not, there are certainly some, and in the bone, perhaps several—comminuted, T or Y shaped, associated with fissures, and great injury to the periosteum and medulla. In all cases there is great injury to tissue cells and small blood vessels, and generally considerable primary necrosis. The lesions of the blood vessels, besides laceration, with consequent extravasation of blood, are such as to cause coagulation of blood, forming thrombi, especially in the cappillaries, and in lessened resistance to diapedesis, both to fluid and corpuscular elements. Hence the tissues are bathed in blood, coagulable lymph, red and white corpuscles, and, further out, in serum and wandering cells. Ordinarily, in fracture by direct violence, there is greater lesions of continuity and contiguity of all the soft parts, especially of the cellular tissue, small blood vessels and muscles, and much greater microscopical lesions and molecular disturbance, with greater extravasation of blood, lymph, blood-cells, and much greater disturbance of tissue vitality and nutrition, and also more primary tissue necrosis. Therefore, there is more extravasation, exudation and dead tissue to be absorbed, and more regeneration and repair of tissue required, and, in the meantime, from beginning to end, a much greater predisposition to the invasion and proliferation of pathogenic bacteria.

In studying the degree of injury to bone and soft parts, apparent and invisible, by direct violence, we must take into consideration the factors or elements of the violence and the position of the bone when the force is applied.

Violence implies,

1st. A power.

2d. An instrumentality.

The power is the force and the instrumentality is the agent or means. The power may impart motion to the instrumentality, the bone being still, or the power may impart motion to the bone, the instrumentality being still. In the first case, the instrumentality strikes the bone; in the second case, the bone strikes the instrumentality. The results however may be widely different. In both cases, the power must be sufficiently strong, and the resistance of the instrumentality sufficiently great, to effect a fracture. With a given power, therefore, a different result would accrue from different instrumentalities; also, with a given instrumentality, a different result would accrue from a different power. Thus a given power might break a bone with an iron rod, and also with a sand bag, but the *degree* of injury would be different. Also, if a greater power were used, the result of both the iron rod and sand bag would be greater, but still differing in degree. The force of a power depends upon weight and velocity—with a given weight, the greater the velocity the greater the force, or *vice versa*, with a given velocity, the greater the weight the greater the force

When the velocity is the determining factor, the force is due to momentum; when the weight is the determining factor, the force is due to gravity. Thus a rock weighing a pound might be thrown by a power with such velocity that it might strike a bone with sufficient force to break it. Or a rock weighing as much as the striking force of the "pound rock," might fall slowly, or even be placed, upon a bone and break it, but the degree and character of injury would be different. Again, the same rock, moving with the same velocity, but with different surfaces, edges and angles, would produce a different result according as to whether it strikes with its surface, edge or angle. Therefore, a given agent of a given force will cause different degrees of injury according to the extent and shape of the striking surface. A motion that is put in operation in opposition to gravity diminishes in veloeity, consequently in momentum and force in proportion to the loss of the original motor power, and the gain of the power of gravity, until brought to a standstill. A motion that is put in operation by gravity increases in velocity, therefore in momentum and force, the longer gravity acts. Therefore the force of artificial power is exhaustive, while that of gravity is cumu-

lative. Hence a rock thrown with sufficient power to carry it 100 feet, might fracture a bone at the distance of 90 feet; but the same rock falling the same distance would produce a more serious injury.

In estimating the probable degree of injury, therefore, of direct violence, we must take into consideration the original power, whether the force is exhaustive or cumulative, the weight, velocity, surface and resistance of the striking body. A proper analysis of these give us a fair estimate of the violence applied to the soft parts and bones.

Next, and scarcely secondary in importance, is the position of the bone when the violence is applied; that is to say, whether it is resting or supported upon another body, or free. A given violence striking a bone that is free and unsupported, would produce *less lesion*, both in bone and soft parts, than it would if the bone were resting or supported against or by another body. In the first instance, there is no counter pressure, save that in the limb; for example, itself; in the latter, there is a counter pressure, the influence and importance of which will be determined by *the position, size, weight, shape and density* of the opposing object. The extent and character of lesions produced by a given force will be, therefore, largely determined by the *character* of the counter pressure. Thus if bone were broken by being struck with a hammer, the bone being free, the only lesions in the soft parts would be *between* the hammer and the bones, and probably a simple transverse or oblique break in the bone. On the other hand, if the limb were on a rock, wood or hard earth, there would be greater lesion in the soft parts between the hammer and bone, in all probability greater lesion in the bone, and also lesions in the soft parts between the bone and the rock, wood or ground, nearly or equal to the lesions between the hammer and the bone. If the opposing surface be soft earth or mud, these last would be proportionately less.

The extremes of violence vary between that merely sufficient to fracture the bone, to a violence sufficient to crush off the entire limb, crush in the skull, ribs or ossa innominata. Between these extremes are the majority of the cases of fracture from accidental violence. The nature of these accidents is largely and mainly a matter of environment and occupation. In the agricultural districts, falls of person, run over accidents by vehicles, kicks of animals, etc., are the principal accidents.

Among machinists, mechanics, operators in factories, etc., the violence is usually the machinery. Among miners, the violence is usually falling accidents—falling coal, rock and slate, and next in importance, run over accidents by tram cars.

Among railroad employees, the violence is usually fall of person, jamming or run over accidents. Among all of them, of course, there may be the violence of assault, which may result in fracture.

A hundred or other given number of fractures occurring successively in each of the above classes would show widely different results—immediate and remote. The best would be among the agricultural class, and the worst among the railroad class. Among the latter would be more deaths and greater loss of limbs. The only plausible explanation of this is the difference in the nature of the violence.

Classification of the Effects of Violence.

1. In violence, in which velocity determines the force, the instrument or agent being light and small, the area of lesion is usually small, and when severe, consist largely of lacerations; the line between the traumatic primary necrosis and the uninjured tissue being distinct, and the amount of killed tissue relatively slight—such as gun-shot fractures, blows with a sharp instrument, hammer, pick, stick, etc., or falls upon small sharp bodies. These cases are generally compound. They are also the cases in which there may be an important complication, lesions of brain, viscera, or large blood vessels.

2. Violence in which weight determines the force, the striking surface large, the area of lesion is usually larger. Visible lesions, open wound, lacerated tissue, etc., less marked, lesions of small vessels, capillaries and tissue cells, (not discernible) often wide spread, and in which there may not even be an abrasion or scratch upon the skin. The bones may be crushed, and if in the vicinity of a joint, the latter opened by a fissure. It is in these cases that there is often great primary and secondary necrosis, and later bacterial infection. Examples of these injuries are found in falling coal, rock and slate in coal-mines.

3. Violence in which the force is weight and velocity combined, the lesions, both macroscopic and histological, are most severe. These are generally run-over or machinery accidents, such as a moving car, or rope, or band on a wheel, or between cog-wheels.

4. In all forms of violence, in which the force is applied at right angles and by one motion, to-wit, compression, there is less disturbance of tissue *beyond* the limits of the striking surface, especially lesions of contiguity in the soft parts. In the bone, how-

ever, there may be great fissuring far beyond the limit. In violence in which the force is applied obliquely, or with a rotary motion, as well as the direct striking force, the lesions, especially of contiguity, and next of continuity may extend far beyond the limits of the striking surface. As an example of these, if a person falls upon a level surface, as on a pavement, striking the pavement at right angles, the lesion of the soft parts, laceration, contusion, etc., will not go far beyond the area exposed to forcible contact with the pavement, but the fracture in the bone—skull usually—may go far beyond the limits of injured soft parts. On the other hand, if the fall is upon an oblique surface, or strikes obliquely, the laceration is greater and the soft parts may be torn up, either as an open flap or subcutaneously far beyond the fracture. The same remarks apply when the injury is from a blow or artificial power.

5. Bacteria may reach the lesions in the soft parts or bone in any of the following ways:

1. Primary laceration, abrasion or scratching of the skin.

2. By being pressed through the unbroken skin by the force of the violence.

3. Through an opening made by the separation of a primary necrosis caused by the violence.

4. Through an opening caused by a secondary necrosis due to pressure of dressings from without, or to arrest of nutrition from within, due to circulatory obstruction or the presence of excessive exudate.

5. By subsequent traumatism caused by the broken fragments or injuries from without.

6. Through the blood.

The relation of the violence to all of these ways of bacterial invasion is apparent, and may be summarized as follows:

1. By solutions of continuity.

2. By crowding, pushing or burying bacteria in the skin.

3. By killing tissues *without* lacerating them.

4. By cutting off the blood supply by lacerations of small arteries, injury to the walls of small vessels and capillaries, resulting in thrombosis, hemorrhage, etc., by which the nutriment is cut off, and by inflicting such traumatism, contusion, bruising, etc., as to excite undue exudation.

5. By the lesions of vessels which permit the escape of bacteria from the circulation, or lodging them in the thrombi or the injured but unbroken walls of small vessels and capillaries. I am aware that the second and last proposition may be questioned—both from the standpoint of authority and the *rule* of clinical experience. But there *are authorities*, who *teach*, and *clinical experience*, have I will admit which *demonstrates* that there may be subcutaneous bacteriological inflammation, *without* cutaneous lesion. This implies the assumption that pathogenic micro-organisms capable of exciting inflammation, *may* pass through unbroken skin or mucous membrane. But under the ordinary conditions they never enter the system through the skin and mucous membrane in sufficient quantities to produce pathological action in normal tissues. But under extraordinary conditions, e. g., great pressure from violence, they may pass *through* or *in* the unbroken skin or mucous membrane, and in the pathological lesions—bruising, contusing, etc.—produced at the same time by the same violence, they do find a favorable soil for life and growth, and *may* set up active bacterial inflammation. Of course, having entered the skin, they may pass through the lymph channels, in the circulation or in wandering leucocytes into the deeper structures where a much more favorable soil for their life and growth will be found. Or without the extraordinary conditions alluded to, to cause their invasion, those which enter under ordinary conditions, and which for a time circulate harmlessly in the blood, may, if stopped in a thrombosis, or escape into bruised, contused or lacerated tissue, set up their specific action. This is due, first, to the arrest of their movement, and second, to the favorable conditions existing at the point of arrest for their life and growth. In other words, they are planted by the blood in a favorable soil.

The practical importance of these possible ways of infection cannot be over estimated. And when we remember that certain kinds of violence applied to soft parts and bone *especially* provides these extraordinary conditions for the *invasion* of micro-organisms, as well as the preparation of the most suitable soil for their growth, and, finally, the mechanical obstruction by which they are arrested, if in the circulation, we perceive the clinical importance of recognizing this particular violence when the cause of "fracture and associated lesions."

In such violence, the power is gravity of short duration, or slow moving artificial motion; the force is weight; the striking surface smooth and relatively large. The *intensity* being estimated by a careful analysis of the above associated factors. The fall through two or three feet of a large rock—possibly partially arrested by props, or the corner of a tram-car, upon a miner, or the passage of a heavy wagon *slowly* over a limb, is an illustration. In such cases the

skin may not be lacerated, or even much contused, but subjected, nevertheless, to great pressure; the underlying soft parts may not be greatly lacerated and torn, but contused and bruised over an area corresponding to the area embraced under the violence, and the bone actually crushed, and fissured beyond the area. *It is great force slowly and more or less evenly applied.*

The practical question is, can the limb be saved? In answering this question, too much stress has been laid upon the visible condition of the wound, and the condition of the larger arteries, and too little upon the invisible conditions and the effects of the violence, *per se*.

The following principles should be largely the guide in answering the question:

1. In fractures and associated lesions of the first class, the condition and extent of visible lesions, especially that of the larger arteries, regardless of the violence, should be our guide. Generally speaking, if the main vessels are intact, *do not amputate*.

2. In fractures and associated lesions of the second class, the chief guide is the source of the violence. If this is so great—regardless of the absence of visible lesions of continuity—as to kill the tissue cells by the direct effect of the traumatism, over an area sufficiently large as to make repair impossible, *amputate*, although pulsation in the large artery may be felt below.

Prof. Van Buren used to teach: "If a car wheel runs over a limb, or a foot is caught between the ferry-boat and the wharf, amputate, even though there be no external lesion." We must be certain, however, that it was "run over" and "squarely caught," and not merely "squeezed" or "pushed."

3. In the third class, the open wound and violence together should determine the question of amputation, but in the majority, especially run over accidents, amputate.

4. In the right angle violence of the fourth class, the principal lesion, in all probability, is in the bone; therefore, unless a joint has been opened, not infrequent either, do not amputate. In injuries to the skull of this class, free incisions should be made, in cases of symptoms from compression, to ascertain the extent of fissure beyond the margins of the injured soft parts. In the oblique angle, the chief injury is in the soft parts, usually of continuity, and therefore, capable of repair; hence, do not amputate.

5. In all cases, of course, the presence of important complications is a guiding principle in the solution of the question of the necessity for amputation.

6. In all cases where there is doubt, give it to the limb. If it is an open wound, disinfect it; if not open, thoroughly disinfect the parts, and dress antiseptically, providing as far as possible against secondary infection through sloughs, or other means of bacterial invasion.

The Arrest of Small Pox in the Vesicular Stage.*

By Seale Harris, M. D.,
Union Springs, Alabama. Vice-President Tri-State Medical Society of Alabama, Georgia and Tennessee: Health Officer of Bullock County, Alabama: Secretary and Member of Board of Censors of the Bullock County Medical Society: Member of American Medical Association.

I desire to call your attention to a new treatment for small pox, which, by cutting short this most loathsome disease in the vesicular stage, promises to rob it of many of its horrors. The theory being that small pox, without septic infection, ends in the vesicular stage; and that the pus forming germs, which are always present in the superficial layers, of the epidermis, by secondarily infecting the vesicles, cause the formation of the pustules, as well as the secondary fever, which for a long time has been thought to be of septic character. In other words, the infective agent of small pox, whatever it may be, produces the constitutional disturbances, followed by the papular and vesicular stages, but without the pyogenic bacteria there can be no pustules formed, the vesicles being the infection atria for the pus cocci.

This fact seems to be borne out by the bacteriological researches of many competent observers, who, without exception, claim that the pus cocci, principally the streptococcus pyogenes, the staphlococcus pyogenes aureus, and the staphylococcus albus, are always found in the pustules; and for sometime Carre has claimed that the pustules were the result of a mixed infection.

The new treatment is based upon the principles of asepsis and antisepsis, and consist in the use of strong solutions of antiseptics to the skin, preferably before the eruptive stage begins, or in the papular stage, or certainly by the time the vesicles begin to form, when if the skin can be rendered aseptic, the vesicles dessicate and are exfoliated without suppuration.

*Read before the Tri-State Medical Society, at its Ninth Annual Meeting in Nashville, Tenn., Oct. 12th, 13th and 14th, 1897.

Since antiseptics were first introduced they have been used in the treatment of small pox with the hope of alleviating the symptoms, and perhaps preventing pitting, though it was not until recently that they have been used with the idea of preventing the entire pustular stage of the disease.

This treatment, like every other advance in medicine and surgery, has numerous claimants for priority in its use; though I suspect that many of these aspirants for medical fame have only a "squatter sovereignty" to their title. The first paper that I have seen on this subject was by Dr. Alonzo Bryan, of Detroit, in the Medical Record of July 18th, 1896, though at that time it seemed to me that somewhere before I had heard such an idea advanced.

Dr. Osborne, of Texas, claims the idea as his own, and in a recent issue of one of our daily papers I notice that Dr. Bibb, of Mexico City, announces to the laity that he has now in preparation articles giving an account of this treatment, which he soon proposes to herald to the medical world. Dr. Bibb, by the way, admits that he received the idea from Dr. Osborne, who had not the opportunity to make a thorough test of the efficiency of the treatment. I want it distinctly understood that there is no effort on my part to antedate Dr. Bibb in heralding this great discovery to the medical world, as the articles on "the arrest of small pox in the vesicular stage," in the Medical Record, by Dr. Bryan, of Detroit, and Dr. Furman, of Shreveport, Louisiana, appeared some months before Dr. Bibb's lengthy interview by a reporter on a daily paper; and I make no claims to any originality in the ideas advanced in this paper. I merely desire to call the attention of this Society to a treatment which seems to me to be based on true scientific principles, with the hope that those of us who have the opportunity to test its value, will do so; and if it hath virtue, we will aid in establishing a truth that will be of eternal benefit to mankind.

To sum up the treatment briefly, it consists in rendering the surface of the body germ free, as we do our hands before performing a surgical operation, and somewhat the same technique may be employed; continuing the antiseptic applications every few hours until the vesicles begin to dessicate.

Manifestly the treatment must be begun before the eruption appears, or certainly in the beginning of the vesicular stage, if we would expect good results; though Dr. Furman claims that he has even aborted the pustules by opening them and applying a ten per cent. solution of carbolic acid into the pus sac.

Dr. Bryan had the opportunity of trying the treatment on only one case, and for his results and methods I quote the following from his exeellent paper:

"In this case the circumstances were such that I only ventured to apply my treatment with the view to the prevention of pustulation locally. I made my applications to the hands and forearms, which showed a very free and perceptable papular eruption. The papules all developed into vesicles, but only a very small number became purulent, dotted here and there. The vesicles dried up and assumed the appearance of flat, dark brown dessicated scales, closely adherent to the skin. In due time they were exfoliated, leaving no scars or pits behind.

"In this case, on every other part of the skin than those that were treated, the vesicles developed into complete and typical pustules of variola; the demarcation at the elbows sharply showing the difference between the arrested eruption and that which was allowed to proceed.

"I first scrubbed the skin of the forearms and hands with a strongly alkaline soap and water, in order to remove the oil naturally existing in the epidermis. Then I washed the skin in alcohol to kill germs and also, to remove oil. Next the skin was washed with a 1 to 500 solution of mercuric chloride. Then it was washed in a solution of hydrogen peroxide. Each of these washings was of ten or fifteen minutes duration. Finally the parts were well wrapped in a thick envelope of borated cotton.

"The above washings were repeated for three days and the borated cotton was applied for a day or two longer."

In March of this year, at the suggestion of our County Board of Health, Dr. N. M. Bledsoe, of Union Springs, tried this treatment on one case of discrete small pox, following somewhat the same line of treatment used by Dr. Bryan. Dr. Bledsoe has treated some hundred cases of small pox in several different epidemics, and reports that the abortive treatment was a success so far as used in this case.

Treatment was begun at the commencement of the vesicular stage, when Dr. Bledsoe counted on the patieut's face over three hundred incipient vesicles. The application was made only to the face, and but fifteen of the vesicles developed into pustules, the others dried up and were in due time exfoliated. The vesicles on the other parts of his body developed into typical pustules.

I saw this case the day treatment was begun, and since his recovery he shows very

few marks or pits. I, therefore, can testify to the efficacy of the treatment in this case.

Since then I have had one case in the pest house, but the negro was not found until the beginning of pustulation, at the time when he was suffering with the secondary fever, when it was too late to begin the treatment.

Dr. Bibb, according to the newspaper report, uses a universal sponge bath of a 1 to 500 solution of bichloride of mercury every three or four hours, and he says that the baths are so soothing to his patients that they call for them before time, like "children cry for castoria." I am satisfied that Dr. Bibb is really a good man in the profession, and I have no doubt but that his work on this line is really valuable, though such interviews in daily papers, under such glaring and sensational head-lines, have a trifle of an unsavory odor. Dr. Bibb claims that he has treated fifty cases according to this method, with only two deaths. One of these cases was of the hemorrhagic variety, which invariably proves fatal; and the other was an old man who was hardly able to stand the initial chill. He says that when the treatment is begun in time the disease goes no farther than the vesicular stage, with no secondary fever, no pitting, and no complications. Dr. Bibb's results are truly gratifying, and I look forward with interest to his paper, which is soon to appear in the American Journal of Medical Sciences.

A treatment which promises to arrest small pox in the vesicular stage, which prevents the secondary fever, the intolerable itching and fearful stench of the pustular stage, and which will mitigate to a great extent the contagiousness of the disease, certainly merits a thorough trial by the profession; and if the treatment proves the success which is hoped for, then to Lister, for announcing the principles of antisepsis, and to the physician who first applied his principles to the arrest of small pox in the vesicular stage, the world is indebted for a discovery that will make variola one of the mildest of diseases—a discovery which, in lessening the horrors of what is now the most loathsome disease in existence, is second in importance only to that of vaccination.

Remarks on Ten Fatal Cases of Typhoid Fever in Private Practice.

By T. Chalmers Peebles, M. D. Lutherville, Maryland.

Case No. 1.—Oliver Shock, aged 16 years, employed as messenger boy. A few days previous to his illness he had eaten, on a wager, at one time, twelve over-ripe bananas. When first seen he was in a severe chill which was soon followed by extreme nervous depression, complaining of difficulty of breathing with a sense of weight in the epigastrium. His limbs trembled and he could not hold his tongue steady for a moment. I will not dwell on the regular typhoid symptoms which gave the unmistakable diagnosis in the case but only state as the point of interest that this patient's nervous system succumbed and he died on the thirty-first day.

Case No. 2.—Archie Semple, a Scotch boy, of 18 years. About a year previous he had a sunstroke and when the typhoid symptoms developed he suffered almost continuously from head symptoms. First, severe headache, followed by delirium, and died before the end of the second week.

Case No. 3.—Kate Starry, a robust, healthy-looking young woman. This case went on favorably until the end of the third week when profuse hemorrhages occurred, followed by collapse and death.

Case No. 4.—Alice O'Brien a strong woman aged 24 years. Passed through the first week of the fever nicely but by the end of the second week both lungs became congested, temperature rose to 104 degrees, pulse 140. Next came on violent and repeated hemorrhages which nothing seemed to control and the patient died on the 24th day.

Case No. 5.—Wm. During, a boy of 16 years. This was a violent case, all the symptoms were active and after the twenty-fifth day several brisk hemorrhages came on but were apparently checked, when on the twenty-sixth day he got out of bed and walked across the room. This act was followed by a severe hemorrhage which carried him off.

Case No. 6.—J. Nestor, aged about 40 years. This man lived by himself and did not send for me until a few days before his death although he had suffered from fever and loose bowels for nearly two weeks.

Case No. 7.—Miss A. M., aged 36. One week after her return from the World's Fair at Chicago developed typhoid fever. There was great depression from the first. The temperature did not run over 103 degrees, but diarrhœa and hemorrhages came on. She died on the eighteenth day.

Case No. 8.—Mrs. J. E. H., over 50 years of age, had been sent to Atlantic City in an anæmic condition, having had frequent attacks of hemorrhage from the gums. On her return we examined her blood and found it contained only 37 per cent. of hæmoglobulin. After a week's treatment

with arsenic and iron it went up 10 per cent. Then came on typhoid fever, and she died with passive hemorrhages from the bowels. She had also hemorrhagic spots on the surface.

Case No. 9.—Mrs. K. aged 48. After nursing her husband for three weeks with typhoid, was taken down herself. Her case at first assumed a mild form but the pulse was small and rapid (120 to 130) and she was extremely depressed in spirits throughout her illness. On the twenty-eighth day of the disease the temperature became normal and remained so for forty-eight hours. then fever returned, patient had nausea, dryness of throat, difficulty in swallowing, oppression on chest, had to be raised to get air. Pain and tenderness over abdomen, but had a natural action from bowels twice a day. Thirty-second day, a. m., temperature 103 1-5, pulse 140; p. m., temperature 101. Thirty-sixth day patient was jaundiced. Temperature, sub-normal, pulse 140, respiration 32 and labored. Next day face flushed, delirium, pulse 160, temperature 95, cadaveric odor from the body extremely offensive; eight involuntary actions from the bowels in the night, consisting of decomposed blood. Died 4 a. m, on the 41st day. The jaundice came suddenly and almost disappeared after the frequent actions on the bowels; after death it was scarcely noticeable.

Case No. 10.—Miss K., aged 28. This young lady had just returned from Europe. The disease with her, took a low protracted course. She had a great deal of delirium bordering, I should say, on insanity. She was begging continuously to be allowed to get up and pack her trunk for another trip to Europe. She had a relapse on the 47th day and died suddenly of perforation and hemorrhage on the 56th day.

Now on reviewing these ten cases I would say that the first six had no skilled nursing and therefore many mistakes were made in their diets, but I believe even under the best of care numbers 1, 2, and 6 would have proved fatal. Nos. 7, 8, 9 and 10 had every attention, each having two physicians and two nurses and there was no error in diet at any time. Numbers 3, 4, 5, 8, 9, 10 were all carried off by hemorrhage. Numbers 1, 6, 7 and 10 had exhausting diarrhœa and in them the prognosis was bad from the first.

Treatment: No. 8 was the only one in which Bland's baths were attempted; the shock was too great and the patient and her relations rebelled, but all had cold sponging when the temperature reached 102 degrees. Ice was applied over the abdomen when hemorrhage occurred. When constipated the bowels were moved by injections. Milk, egg water, brandy and beef tea were the principal articles of diet.

Woodbridge's treatment is attracting quite a number of physicians throughout the country and hundreds of a certain class of practitioners think they are making wonderful cures. I have no doubt of its popularity for we all know how most patients are delighted to think that their doctor is "working over them" and doing something all the time. Many a young doctor forgets that typhoid fever is a general disease and by no means limited to the intestinal tract, and even were it possible (which it is not up to the present time) to destroy all the bacteria in this tract there would still be enough in the blood and general system to maintain the fever. Then again they must not be misled or pride themselves over a few dozen cases which recover under antiseptic treatment. Nature is quite well able to take care of the great majority of cases if she is not meddled with! In my experience I had thirty-one cases of typhoid fever before one fatal case occurred, yet again I have had six deaths in rapid succession in one season. Some cases seem to carry the stamp of doom from the very onset of the disease taking in, as it were, such a large dose of the poison that the whole system totters to its fall, at other times the bacteria seem to steal in at the back door and are bashful about getting to work until they are re-inforced by little fermentative explosions. Some time ago I published an account of six irregular cases of typhoid fever in one family. These cases all relapsed, some more than once. It did not seem possible that fresh poison could have been introduced from without, yet the explosions seemed to come on at intervals.

Thirty-six Cases of Typhoid Fever Treated by the Woodbridge Method.

By D. A. Stanton, M. D., High Point, N. C.

My experience with typhoid fever during the fever season of 1896 was such as to cause me to look for and grasp any method that promised good to those falling a prey to this dread disease and coming under my care.

During the above season I treated 53 cases of typhoid fever and 12 of malarial fever, with a mortality of 12 4-13 per cent. of the typhoid cases. My plan of treatment during the greater part of the season was that in general use, and what I had been using for three years with fair success. The results were very unsatisfactory, since the

mortality from fever in this part of North Carolina is only about two per cent., and had not gone above that rate in my practice for five years prior to the season of '96.

I very naturally became disgusted with my success and towards the close of the season began to study the merits of the Woodbridge treatment. Recognizing the fact that an intestinal antiseptic is essential to success in a majority of cases of typhoid fever, I concluded that in Dr. Woodbridge's prescription there was a combination of therapeutical agents which came nearer answering the purpose than any drug or combination of drugs which I had gotten together, I began to use it, but not until the season was nearly over.

I treated only six out of the fifty-three typhoid cases with the Woodbridge treatment, each one getting well in a much shorter time than those of the forty seven treated with other agents.

Since the type of nearly all epidemics grows milder the longer the epidemic lasts, I thought, perhaps, this had as much to do with the success in these six cases as the remedy, therefore I did not fully endorse the Woodbridge treatment till I had given it a more thorough trial.

When fever made its appearance this past June I did not have the remedy on hand, so I treated my first case on the old plan, which took three full weeks to terminate the fever. As often happens there was within a few days a recurrence of the fever and I returned to find the last state of my patient worse than the first, and for four weeks I could not tell what the result would be. Finally the patient recovered. This experience very naturally called to mind that of '96, and I again turned to the Woodbridge treatment.

During this past summer and fall I have treated thirty cases of typhoid fever with the Woodbridge treatment, with thirty recoveries, or 100 per cent.

In my practice it has not only cured the patient, but has, in every instance, except one, greatly shortened the duration of the fever. In the one exceptional case I could not continue the treatment on account of ptyalism and was forced to discontinue the treatment and fall back on other measures. This case lasted eight weeks and recovered. The only antipyretic used was cold, or hot water, as a bath, whichever the patient's fancy called for, and plenty of cold water to drink, which should be insisted on always regardless of plan of treatment pursued.

The pulse rate remained below 100 in every case and the temperature ranged from 99 to 102½ deg.F. Not one of my cases lasted over eighteen days and the most of them were dismissed in from twelve to fifteen days, without a single relapse.

Some one may say that my cases were not genuine typhoid. I think they were. The other physicians here treated as great, if not a greater, number than I did, and to my knowledge some of their cases lasted as long as ten weeks, and since my cases were distributed all over town, there could be no possible election in my favor. I feel that thirty-six successful cases is a reasonable number, at least, in favor of, and to encourage me to continue the use of the Woodbridge treatment.

Treatment of Malaria.

By Robt. S. McGeachy. M. D., Raleigh, N. C.

Having had a number of cases of malarial fever to treat this summer, I have found by experience the following treatment to be of great value in any form of the fever.

On being called to see a patient, who has been having chills, if he is suffering from severe headache, backache, and pain in the limbs, I prescribe

Caffine Cit.....gr. i.
Soda Bicarb.....gr. vi.
Acetanilid.....ʒi.
M. et. Ft. Cap. No. 4. S. One every 2 hours until relieved.

I never order more than four of these capsules, for they seldom have to take that many before relief is obtained, and if that number does not give relief, it is useless to continue them; if colomel is indicated I order the following:

Calomel.....
Soda Bicarb..... a. a. gr. vi.
M. et. Ft. Cap. No. 1. S. Take at bed time.

Then give

Quin. Sulph .....ʒi.
M. et. Ft. Cap. No. 12. S. One at 6, 8, 10. 12 each a. m. until all are taken.

After having taken the above, give the following as a tonic:

Liq. Pot. Arsen .....ʒiss
Quin. Sulph.....gr.xvi
Tinct. Terri Chl.....ʒii
Glycerine .....ʒss
Aquæ.....; .....qs. ad. ʒii
M. S. ʒi three times a day, after meals.

If the case has not been a severe one, two ounces of tonic is sufficient; if severe, I order three or four ounces, according to indications.

If this treatment is carried out minutely, it will seldom fail to cure. I have given it a very thorough trial, and have, in every case, received the best results.

The Surgery of Typhoid Fever.*

By Hugh M. Taylor, M. D., Richmond, Va., Professor Practice of Surgery, University College of Medicine, Richmond, Va.; Surgeon to Virginia Hospital, etc., etc., etc., etc.

The evolution of Aseptic Surgery, has broadened the scope of operative interference, to such an extent as to call for not a few protests against the "furor operativus." Let me urge that conservatism is not always embodied in the idea of masterly inactivity. Surgery has for its highest ideal to treat directly the cause of disease and death. Asepsis has brought within the province of conservative surgery many conditions heretofore considered beyond its resources. Not one of the least promising fields of usefulness, recently much impressed, is the surgery of complications, arising in typhoid fever.

I. In the treatment of typhoid perforations by celiotomy, and suturing the perforation or perforations, we have a last resort, in what are practically hopeless cases without operation.

II. In the treatment of the irremediable hemorrhage we have in celiotomy and ligation a resource which offers a reasonable prospect of doing good.

III. In transfusion for the relief of the effects of profound hemorrhage and shock we have a remedial measure of great value. Typhoid fever in all of its phases has, until recently, by all except a few pioneer students of the subject, been considered essentially a medical subject.

It is claimed that from one to two per cent. of all the cases of typhoid fever patients have perforation. It is claimed that six per cent. of the deaths from typhoid fever are from perforation. From one to two per cent. of all the cases of typhoid fever then come within the province of operative surgery, and six per cent. of all cases dying from typhoid fever are essentially surgical.

The field of surgery in typhoid fever complications is even wider than that indicated in the treatment of perforations. In the Munich hospital report of two thousand cases ninety were attended by intestinal hemorrhage. Some of these jeopardized life from the profuse bleeding. Most physicians have sat helplessly by the side of patients bleeding to death from hemorrhage of the bowels. Opium, ergot, mineral acids and tannic acid are in my opinion poor remedial agents for such a catastrophe, shock or syncope from hemorrhage. Nature's potent hemostatic contraction and retraction of the vessels and syncope is probably the remedy which stays the bleeding.

I recall a case in my practice some years ago in which a young man literally bled to death in twenty-four hours from bowel hemorrhage. This patient had been in bed with fever only a week. He may and probably did have fever a week before he gave up and went to bed. No such case should be left to the resources of nature aided by such questionable measures as the medication I have mentioned. Laparotomy and an effort to arrest this hemorrhage is as rational as laparotomy for the arrest of hemorrhage incident to ruptured ectopic gestation. Fortunately we do not often meet with cases of fatal hemorrhage such as I have described, but if we do meet with them, we will have fewer sins of omission to answer for, if we make an intelligent effort to control a hemorrhage immediately dangerous in some instances, remotely serious in all, because of progressive anemia incident thereto. I have heard the statement made that patients often seem better after a moderate hemorrhage. I know nothing to justify such a statement. Hemorrhage, as a rule, results from the separation of a slough in an ulcer; in other instances from the margin or surface of an ulcer devoid of a slough, and perhaps in exceptional instances from an engorged mucosa, all of which conditions point to actual or threatened bowel lesion. If the life of the patient is endangered from hemorrhage or repeated hemorrhage, and the danger line is not passed after medication and saline transfusion, open the abdomen. What then? If the bleeding point can be ascertained and compression of the vessels in the messentery does not control it, then a resection of the ulcer and enterorrhaphy is justifiable. If compression of the mesenteric vessels will control the bleeding, then the feeding vessels should be ligated. As far as I know this practice has never been carried out. It may sound extremely radical. Granting this to be true, you will be fortunate if in your practice you do not in exceptional instances meet with cases, so desperate as to warrant heroic practice. Dr. Hunter McGuire seems to have been the first to urge this practice.

It is the family doctor and not the abdominal surgeon who will at first have to assume the responsibility in connection with the complications of typhoid fever. This impels me to urge that the surgeon should be called early. "I would urge that the wise physician is he who sends for the surgeon

*Read before the Richmond Academy of Medicine and Surgery.

early, and the wise surgeon is he who is prepared to operate upon a moment's notice."

Before considering the phase of our subject of widest scope and greatest interest, typhoid perforations, let us consider for a moment the field of usefulness of transfusion in typhoid fever. In the shock incident to perforation or hemorrhage, in the acute anemia, incident to prolonged ptomain poison and possibly as a remedial measure in the treatment of the ptomain poison, we have in the transfusion of normal saline solution, an agent of great potency. In puerperal sepsis, in puerperal eclampsia and in surgical kidney and other forms of sepsis, transfusion has been practiced with the idea that lavage of the blood favors elimination of ptomain poison. Upon the same principle, transfusion may be found of value, in favoring the elimination of the typhoid ptomain. Certainly in the depression incident to hemorrhage and shock in typhoid fever its influence for good is often marked. Some months ago this fact was impressed by a case which occurred in my practice. In the seventh week of fever, after profuse intestinal hemorrhage, a young woman was apparently dying from exhaustion; was cold and sweating, and unconscious from great depression. Respiration thirty or forty; pulse 140 deg., and absent at the wrist. The continuance of life seemed of only an hour or two. Whiskey, strychnia, digitalis, caffein, and nitro-glycerin had been pushed as rapidly as was thought safe, with no perceptible influence for good. A quart or more of saline solution injected in the cellular tissue of the thigh and shoulder became diffused by massage, but apparently was not taken up by the vessels; it certainly produced no appreciable effect upon the heart. Such was the undistended condition of the blood vessels, even after cording up the arm it was difficult to find a vein. Into the open vein, the sharp point of a glass pipette of an eye-dropper was fastened by a ligature, and the other end of the pipette was fastened in the end of a long tube attached to a fountain syringe. This quickly improvised transfusion apparatus acted nicely. By the time as much as a pint of fluid had been introduced into the vein the pulse was full and strong, and the introduction of a quart in all increased the volume and arterial tension until the moribund patient's pulse was as strong as that of any of the attendants. The skin became dry, the color of the face and lips more natural, and the extremities warm. Not much improvement in the breathing was noticed; and while the volume of the pulse was so much improved, its rapidity was not correspondingly decreased. The pulse-rate continued very rapid, and the respiration rapid and shallow.

The improvement after the transfusion lasted five or six hours, at which time the pulse lost in volume until the wrist-pulse was indistinguishable. Transfusion direct was again resorted to with the same encouraging result of increasing the arterial tension and drying the skin, but no effect upon the pulse-rate or respiration was apparent. This last function became more and more embarrassed, and was the ultimate cause of death.

My experience in this case impresses me with the belief that we have in transfusion a means of great value in the depression incident to hemorrhage in typhoid fever, and possibly an adjunct in the depressed circulation resulting from any one or more of the many complications arising in typhoid fever.

In severe hemorrhage or shock from perforation, transfusion is certainly a safe expedient, easily adapted and a resource of great good. In severe hemorrhage or shock from perforation, transfuse, but in this instance, as in all cases of hemorrhage, hæmostasis must rapidly follow transfusion, or else the reaction secured to a large extent by transfusion will empty the saline solution out of the same vessels from which the blood escaped. Transfusion itself is credited with hæmostatic properties. The saline solution stimulates the heart's action, causes the capillaries as well as the large vessels to contract.

The mission of operative interference in perforations from typhoid ulceration should be to limit or prevent local or general septic peritonitis. We best limit peritonitis by preventing its occurrence. The key to the successful treatment of this lamentable condition is an early diagnosis and an early resort to operative measures. My experience with cases in which perforation has occurred warrants the assertion that an early diagnosis is usually made. Within the past month I have seen in consultation two cases in which the symptoms were so plain that a prompt diagnosis was easily made. This was equally true in a case which occurred in my own practice about a year ago. This last was the first I have been called upon to treat, since the possible good from operative interference has been so clearly impressed.

The patient had been sick only a few weeks, the typhoid fever was mild, and convalescence was thought to have set in. Acute abdominal pain and shock were the cardinal symptoms which enabled me to recognize the grave complication and to

urge immediate operative interference. Inevitable death was prognosed without operative interference, and probably a fatal issue in spite of even prompt action. The friends and relatives of the patient refused to sanction the operation. Septic peritonitis was fully developed in forty-eight hours, and impending death caused those who had assumed the responsibility of denying the patient his only show for life, to implore, now when it was too late, that the resources of surgery be applied. I did wrong perhaps in yielding to their request. The uninitiated cannot differentiate between an operation performed to prevent septic peritonitis and one done to cure it. The fatal issue is not credited by this class to the want of early operation. Naturally in their opinion the operation is the immediate cause of the death. We should endeavor to educate the people to know that the death in this and allied conditions, is due to a continuation of the morbid processes for the relief of which the operation is done. We should never lose an opportunity to impress the idea that an early operation is conservative in its broadest sense. Not to the operation, but to the want of an early operation should be credited the fatal issue.

An operation in a condition which is almost hopeless, and the fatal issue may deter some other cases from being operated upon. It has been my rule to give the patient the benefit of the chance, if it be only one in a thousand. The effect of this policy was seen in a case I saw in consultation a few weeks ago. Unfortunately, this last patient lived next door to the one just mentioned and knew all the circumstances attending his sickness, the late operation and the fatal result. In the midst of a mild attack of typhoid fever perforation took place. Sudden and continued abdominal pain stamped the disease. Operative interference was advised and refused by the husband of the patient, and refused because he had promised her to do so. A few nights before she had dreamed that perforation had taken place and that the doctors advised an operation. The effect of this dream was to make the husband promise not to sanction an operation. Doubtless the dream was the outcome of thinking of the fatal case, which had not long before occurred next door to her. This splendid young mother and wife was allowed to die, which she did in forty-eight hours, without an effort to repair the ulcer.

A third case recently seen in consultation illustrates the disaster of procrastination. A young man in the third week of a moderate attack was taken with the typical symptoms of perforation, i. e., acute pain, shock, etc. The sudden onset of the symptoms, almost like a thunderbolt from a cloudless sky, typifies the condition of perforation. In forty-eight hours diffuse peritonitis, with the usual symptoms of distension, vomiting, depression, etc., was at its maximum, and here was another case, which had been allowed to pass from the realm of possible to that of hopeless surgery. Another instance in which the operation would be credited with death and no account of the septic peritonitis from the contents of the small bowel (always fluid) pouring into the peritoneal cavity be taken. If we could only impress the idea that the patient dies from the disease which the operation seeks to cure, and the idea that the early operation seeks to prevent a disease so fatal to life. The facts in the case were fully explained to the friends of the young man. Only the faintest shadow of hope was held out to them, and it was devoutly hoped that they would elect to let him die without an operation, but they grasped at the last straw and we were placed in the embarrassing position of operating upon a moribund patient. A section after direct transfusion revealed general fibrino purulent peritonitis, and a small pencil sized hole in the ileum, twelve or fifteen inches from the ileo-cæcal valve, from this fluid fecal matter poured whenever the bowel was moved. The suturing, irrigation and provision for drainage with glass tubes and gauze was the work of a few minutes. The condition of the patient did not warrant the time necessary to disentangle the matted bowels or to wipe off the abundant fibrinous deposits found extensively covering the intestines. As was to be expected death ensued shortly after the completion of the operation, and the finale added another stone to the immeasurable monument dedicated to procrastination in surgery. With an experience with three recent cases, two of them operated upon, but both so late that an operation was hardly justifiable in either, and the third case in which operation was declined because of a knowledge of the fatal issue in the first case, it is but natural that I should appreciate the needs of educating the profession and public to appreciate the idea that delay is fatal and that it is not just to the surgeon, to surgery, or to the patient for the medical adviser to procrastinate until the case has passed beyond the province of rational surgery. It is claimed that no condition save a moribund one contra-indicates operative interference. While this is true as evinced exceptionally by the recovery of such cases, the clinical picture presented by an operation done to prevent the consequences of perforation is

much less horrible than one done to cure such disastrous consequences. Not a few practitioners, having the responsibility of such cases in hand, will excuse themselves for sanctioning delay because of, what I think is a wrong opinion, that perforation may exceptionally occur and be recovered from by the unaided efforts of nature.

I am strongly of the opinion that the supposed instances of recovery were not really perforations into the peritoneal cavity. While every abdominal surgeon is often impressed with the wonderful repelling power of nature, impressed with her almost superhuman power to block by plastic peritonitis avenues of infection, I do not believe she is ever equal to the task of limiting the outpour of fluid feces from a typhoid perforation. Necrosis of mucosa muscularis and localized peritonitis with an intact peritoneal covering of the ulcer is, I think, not infrequent. Agglutination around the weakened bowel wall of omentum mesentery, etc., by the plastic peritonitis is a further sequence but this morbific condition is not perforation into the peritoneal cavity. Fibrino purulent and septic peritonitis and not plastic is the type of peritonitis incident to contamination by the fluid feces of typhoid fever. It is a forlorn contest between nature, and sepsis incident to a perforation direct into the peritoneal cavity, and the sooner this idea is impressed, the sooner will the surgery of typhoid fever be placed upon undisputable grounds.

My experience, limited it is true, while intensely impressing the idea that delay is fatal, is emphatically in accord with those who hold:

1st. That perforating typhoid ulcer can be, and should be, diagnosed prior to the development of local or diffuse septic or fibrino purulent peritonitis.

2d. That a perforation of a typhoid ulcer into the peritoneal cavity means the discharge of virulent septic contents in quantities far too large to justify the hope of its being circumscribed by plastic peritonitis.

3d. Diffuse septic or fibrino purulent peritonitis with inevitable death if left to the resources of nature is the unvarying result of this complication of typhoid fever.

4th. That the treatment of complete typhoid perforation is essentially surgical, and the surgical treatment is logically conservative. That the treatment of uncontrollable hemorrhage with the view of preventing immediate danger and subsequent increased anemia is probably within the provision of rational surgery. Rectal, cellular and direct transfusion is a resource of great value in the treatment (a) of shock, (b) of hemorrhage, (c) probably of ptomain poison.

5th. That the death rate is large in spite of, and not because of operative interference, and in complete typhoid ulceration is increased by each hour of delay in resorting to operation.

6th. That the mission of operative interference is to prevent septic and fibrino purulent peritonitis.

7th. The idea should be impressed that the time often conceded by the physician as warranting operation, i. e., the developed condition of diffused peritonitis, is the time practically conceded by the surgeon to be too late, the case having then passed with few exceptions beyond the province of rational surgery.

8th. Not even a moribund condition should excuse us for abandoning patients with typhoid perforation, since supurative peritonitis from just as desperate sources has been brought within the scope of successful surgery by an improved technique.

The statistics, though too few to be conclusive, support the opinion that timely surgical interference is conservative rather than radical. Of fifty-two cases recorded, seventeen recovered, 32.68 per cent; or, excluding some doubtful cases, of forty-five operations, eleven recovered, a percentage of 26.22. While those statistics will be changed for the worse by the cases it has been my misfortune to see, there are doubtless successful cases, reports of which I have not seen, to offset them, and with a due appreciation of the possibilities of early resource to operative interference, I anticipate marked improved statistics in the near future.

The technique of the operation does not differ from that in vogue in the treatment of intestinal perforation and its consequences from other causes. A knowledge of the fact that the perforation is in a majority of instances single and occurs in the ileum within eighteen inches of the ileo-caecal valve enables the surgeon to find the lesion without much trouble.

It is claimed that there is hardly a well authenticated case of gunshot wound of the bowel with recovery. I am skeptical as to the correctness of the diagnosis of complete typhoid perforation with recovery; certainly in the absence of a post mortem. Those who have seen the fluid fecal matter pouring out of the perforation will appreciate how small must be the chance of preventing infection in any way other than by an operation, and will, I think, be a sufficient appeal to us to do the best we can by operating upon even the most desperate cases.

A Defense of the Prepuce and Ovaries.

By C. B. Ferrell. M. D., Columbus, Ohio.

Dr. Brown, of Shippensburg, Pa., in the January number of the journal of Orificial Surgery, says: "Nature provided man in his primitive state with a prepuce, only to protect his procreative organs from the bites of insects and the pricks of thorny briars, like the animals of which he was surrounded, but evolution has carried him to a higher state, *and given him pants to protect those parts*;" he has no further use for this curious relic of a long past barbaric age. We think Nature has made a great mistake for if the theory of Evolution is correct, man was at that time in boastful possession of a caudal appendage also like the animals, which might have been used by him to protect those parts from the bites of insects; and Nature evoluted off the tail as of no further use and left the prepuce. But the Doctor does not pretend to divine natures reason for this neglect of duty. It is said that Nature's works are all for some good purpose; may we not suggest that Nature had in view the Modern or Orificial Surgeon who without the prepuce would be without a calling, The Doctor says "that by circumcising the children that much good could be accomplished toward the preservation of health and increase the longevity; the Jews who practice circumcision in childhood are known to be exempt from many diseases which affect other races; they grow to manhood and womanhood strangers to disease.". A very remarkable statement indeed, but the most remarkable part of this statement is, it is not true, he fails to point out one single disease which effect other nations that the Jews are exempt from, except consumption, and every person with experience knows that that is not correct.

"In order to render the rising generation healthy, morally and physically, we must pay attention to this redundant tissue and advise its early removal. Fully three-fourth of all male babies have abnormal prepuces." "Ah! there's the rub." All diseases have their origin in our specialty and therefore must come under our immediate attention and care. If nature by evolution has made one-fourth of the male babies up to the Doctor's standard with a few more evolutions, she may bring her work up to the standard of science. He quotes Professor E. H. Pratt, who says, "A perfectly formed foreskin in a relaxed state of the organ extends no further than the point of the glans penis." This is an up-to-date foreskin, but the Professor fails to give us the degree of laxity which characterizes a relaxed penis at the time of inspection. With the little experience we have had with that organ, we would say that there are various degrees of laxity existing under different circumstances, and we have also learned that nature has made that organ of various dimensions as to length, diameter and expansive qualities. The Doctor has failed to give the regulation style, therefore we are in the dark and must await further light or charge it up to Nature's mistake.

"The prepuce is an important factor in the production of Phthisis; this can be proven by the immunity of the Jewish race from Tubercular affections." This being true what wonderful prepuces the negro and Indian races must possess, for they are more predisposed to consumption than all other races and what an amount of trouble might be saved to our Bacteriologists of the Koch School by looking to the prepuce for the location of the nest egg of the Bacillus.

"The elongated prepuce often plays an important part in Enuresis. Children who pass their second year and are unable to control the vesical Sphincter may be said to be suffering with Enuresis." Therefore we must take it for granted that Jewish boys do not have Enuresis and of course all female children, both Jew and Gentile, are free from it and should be immune from consumption. Such are the conclusions to be drawn from the arguments as given by this Orificial Surgeon.

Now I do not pretend to say that there are not cases of Abnormal development of the prepuce which require the operation of circumcision and do not hesitate to operate in all such cases, but when any man claiming that three-fourths of the boys born in this or any other country are thus deformed, brands himself; as lacking in mental balance or a modern Surgeon of the special variety who by reason of dwelling upon his specialty has reached that point of mentality known as monomaniacal; where all afflictions of mankind are made to conform to his specialty.

Now we think that the prepuce was given to man for a higher and more noble purpose than simply to "protect the glans penis from the bites of insects and the prick of thorny briars." Anatomy and Physiology teaches us that the glans penis is the extremity of the organ; it is covered with a delicate mucous membrane; is furnished at its base with sebaceous follicles and covered with a reflection of the skin called the prepuce. The glans are formed of spongy texture, susceptible of being thrown into erection and is similar in composition to the clitoris in the female. The prepuce is de-

fined as a prolongation of the integument of the Penis which covers the glans, and is composed of two membranous layers, external or cutaneous and internal or mucous. This membrane is kept lubricated by the secretions of the sebaceous glands which keep the glans exceedingly sensative, while the clitoris called the glans clitorides is smaller than the glans Penis and is also covered with a prepuce formed by the mucous membrane of the vulva and is also capable of being thrown into erection. These glans in both male and female are supplied with nerves of special sensation and each by titulation, results jn that peculiar phenomena orgasm. It is plain to my mind that Nature (as the Doctor does not appear to recognize any God except Nature) intended these prepuces as a protection to these sensitive and delicate parts, not only to protect them from the "bites of flies and the prick of thorney briars," but also to protect them from the chafing of the clothing as well, so that sensation would not be blunted and the ends of Nature not be thwarted of its noble purpose, that of propagating the species, for without orgasm there would be no ejection of semen and while the removal of the prepuce does not prevent conception, it must necessarily make it more difficult and to some extent modify the sensation, for the mucous membrane of the glans, if subjected to constant friction by the clothing must necessarily harden that smooth and velvety surface and the nerves of special sensation loose that acuteness which Nature has divined for them. This theory is well sustained by the effects of masturbation in the female, not one of whom have practiced it to any great extent, ever enjoy the marital rite and but few. if any, ever conceive. This habit is the cause of much unhappiness in the married life; so much so that every physician of experience has been consulted upon the subject, and every female who has consulted the writer upon the subject where no disease existed, making the act painful.

I have invariably upon close inquiry, found that they had indulged in masturbation during their early life, and one and all have told me they could produce orgasm by titulation with the hand.if used vigorously, proving to my mind that the rough handling of the clitoris diminishes the sensitiveness to such an extent that the natural action was insufficient to produce results. I do not believe the modern Surgeon can improve on Nature's works, although he be a specialist, and condemn this indiscriminate use of the knife upon helpless children and women under the frivolous pretexts which have become so common during the past few years. But if thy prepuce offend thee, cut it off; but if it does not offend, keep and preserve it; it is one of Nature's gracious gifts.

It has become quite common for Surgeons to urge the removal of the prepuce upon the grounds of cleanliness alone where no disease existed. If a man is too indolent to wash and keep himself clean, I think it would be better to exterpate the entire organ and stop the propagation of his species. I have also known instances where the so-called Surgeon have recommended the removal of the ovaries to young married people for no other reason than that they did not desire children. In fact this operation has become so frequent upon various excuses that if continued a few years the race of well to do people will be extinct, for it is a fact that poor women are not subject to the disease requiring operation, only those who have a competence are required to give up that part of their anatomy to the Bunko Surgeon.

But a few weeks ago the writer was called to see a girl fifteen years of age, who had the day before been told that she must go into the hospital to be operated upon for a retroverted uterus. An examination revealed the uterus and appendages undeveloped, no displacement or disease whatever. It is of daily occurrence to see women who have been doomed by some operator to the Surgeon's knife, who are only suffering with Neuritis or congestion of these organs, which would readily yield to medical treatment properly applied. The time has come that the ovaries are looked upon by the Abdominal Surgeon in the same light with which the Orificial Surgeon looks upon the prepuce as "that curious relic of a long past Barbaric Age." And like the prepuce and appendix, vermiformis would have been evoluted off, but Nature in her wisdom foreseen the modern Surgeon and left these relics for his amusement alone. Many young physicians of to-day can find in their first years' practice more cases requiring Abdominal section than physicians of forty years experience have ever seen; and should he doubt the propriety of so many operations, their only argument would be, "he is an old fogy, too old to learn."

I do not wish to be understood as saying there are not cases of ovarian disease which require an operation, but do know there are many cases operated upon which should not be, and many young women have had their lives made miserable and many sent to an untimely grave by reason of the injudicious use of the knife. Too little importance is attached to the dangers of the operations and the good results are over-estimated. I

have seen scores who have been operated upon who have within two years after the operation lapsed into as bad, or worse, condition of suffering than before, and those who are permanently benefitted are a very small per cent of those operated upon.

Tait, the father of the operation, says, "that after fifteen years of experience, during which time he has operated upon several hundred cases, and by carefully watching the results and after gathering all the statistics he could; and with the few cases that were permanently benefitted, or who did not within two or three years lapse back into a condition of suffering similar, if not worse than before the operation; and with the large number of deaths following the operation, he was hardly prepared to say that the operation was justifiable; certainly it was performed ten times where it should not be performed more than once."

Observations on Continued Fever.*

By F. W. P. Butler, M. D., Edgefield, S. C. Late Acting Ass't. Surgeon, U. S. Army: County Physician of Edgefield County, S. C.; Member of S. C. Medical Association.

My excuse for presenting for your consideration a subject so often discussed, and concerning which so much has been written by the medical profession in past years, is to obtain more light on what practical knowledge I claim to possess. I am in hopes after I finish giving my experience that the older members especially will discuss it, because their practical experiences are greater than the younger. In my county during the past summer and during the winter we have had many fever cases. When I use this term, I mean that form of fever which lasts from three to nine weeks. A great many names have been given this fever, namely, typho-malarial, prolonged malaria, continued and typhoid. I have adopted the name 'continued fever,' for I am satisfied that it is not malarial in character, because it does not respond to quinine, the antidote for malaria. It cannot be aborted so far as I am able to observe. The prodromata of the attack is very similar to typhoid or enteric fever. Its duration is of much the same character. The treatment very similar. While I was in the United States Army, the first post at which I was stationed, in the Indian Territory, Fort Supply, I found a hospital full of this fever. I had a good opportunity to study it with all the hospital facilities afforded by the United States Army. I treated fifteen cases and lost one. Soon after taking charge I was relieved by a surgeon of higher rank. He diagnosed all the cases as typhoid. I differed. We had one patient, a dark-complexioned, German cavalry man, who, I think, died from nostalgia, as a complication. My superior stuck to typhoid fever, I held to my opinion. Our steward did the post mortem nicely and most thoroughly. We found the tongue red, pointed and moderately coated. The autopsy further revealed a slight congestion of the small intestines and the spleen a little enlarged. Other organs appeared to be in a normal condition. No lesions of Peyer's patches were noted and enlargement or ulceration was notably absent. These being pathognomic of typhoid fever my opinion was sustained. I had, at several army posts ample opportunities to investigate practically this form of fever, and my results were like the one just stated. The cases that have appeared in our locality, in Edgefield, have been quite similar to those already noted. In this continued fever it is very seldom we see any serious bowel trouble. In most cases, however, slight tympanitis. It is my opinion that this form of fever can assume symptoms very like typhoid by indiscretions in diet or by imprudence on the part of patient. I will cite two cases later to establish this opinion. I have also known convalescent cases, by dietary indiscretions and by getting up too soon, to take on enteric symptoms of a most serious character. This class of cases almost invariably die from hemorrhage of a most obstinate character. The tongue, we all know, is the indicator for the entire enteric system. The red edge, pointed, tremulous tongue, shows conclusively that the visceral apparatus of the system is in a state of inflammation. It is reasonable to conclude then, of what paramount importance it is to strictly enjoin our patients the absolute importance of liquid diet, milk of course being the diet of all others. Now if this fact is established in our minds, the next important matter to consider is the therapeutic agents to employ. On this subject I have concluded from practical experience that the less you interfere with the viscera the better are the chances for recovery. If it is hard or impossible for the digestive apparatus to manage food, it is harder for it to, or rather more difficult for it to assimilate excessive medication, which is toxic in its effect. Therefore appeal to nature and not meddle your feebleness on her. As I have said this disease is self-limited, running its natural course. I have observed that the patients who fight hardest in the incipiency of the

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attack suffer most when the fever sets in well. I have noticed of late in an article written by Dr. Brown, of Alexandria, Va., in which he asserts that frost and the cold blasts of winter kill out this form of fever, which he calls prolonged malaria. I am free to admit that these seasons may moderate the attack, but we have fever all during the winter in Edgefield. Evidently the origin of continued fever is from the water, air, or food. Most medical doctors call it typhoid, but I contend that it is not this form of fever. It however assumes symptoms quite like typhoid. The temperature of continued fever is similar to enteric fever in its morning fall and afternoon rise. I find that the temperature rarely remains above 104 degrees and seldom reaches 105 degrees. I have also noticed in convalescent patients a marked tendency of the temperature becoming sub-normal, most likely caused by a debilitated condition of the system. I remember having a family of eight, all of whom had attacks of this fever, all but three had a sub-normal temperature.

In almost every case where there is any complication the result has been fatal. I treated one case, a thirteen-year old girl with incipient phthisis, who died, with temperature not rising very high. Another case of heart lesion, no serious pyrexia, who died. I have often wished for some talent for bacteriology in order that I might search for the plasmodium malariæ of Laveran, or endeavor to ferret out the bacilli of continued fever. I am by no means certain that Widal, with his sero-diagnosis, would have found many positive results in my cases. In reference to the treatment I shall not have much to say. Of late there has been a great deal said about Dr. Woodbridge's treatment. We have had the sugar coated pill mania and the gelatine coated pill era, and we are just about recovering from the tablet paroxysm. I have nothing to say of this form of medication but to admit that I do not put much faith in it. I think that Dr. Woodbridge's idea is always contra-indicated in this form of fever, and in typhoid fever, for in both cases we have an inflamed alimentary canal, and by his treatment we only add fuel to the fire, for I believe to a certain extent fever is an effort of nature to throw off infection. Then the pill and tablet idea is impracticable, because our congested intestinal mucosa will not act on them every time. My plan of treatment is as follows: When the case comes to me with the prodromata of this fever, or with the history like it, I give an active mercurial purge of calomel, or pill hydg. Then put him on five grains of bi-sulph of quinia, to be taken in coffee, water, or wine, every three hours for two days; after two days he takes the powder in solution three times a day. If he is not relieved by this I put the patient to bed and watch him carfully until I diagnose the case. After this I lay down three cardinal rules: 1st, absolute rest in bed; 2d, absolute liquid diet; 3d, good nursing, with no company. I preach this for at least one-half an hour and explain fully my reason for each rule. After my case is well under way I then order, according to age of course, one dose of turpentine emulsion three times a day. From this on I combat bad symptoms as near as possible. I have very good results from ammonol in powdered form as an anti-pyretic, and for hemorrhage large doses of opium, ergotine alternated with heroic doses of muriate tincture of iron.

As far as possible I let alone the bowels, and about twice a week I order copious enemas, which act nicely. The cases I refer to in the first part of this paper, showing the importance of giving up to an attack and not attempting to abort it by physical endurance are two in number.

Case 1st: Y. O., white, age 22, a man of powerful physique, just would not go to bed but moped about for over a week with a temperature ranging from 101 to 104 degrees. At last I told him unless he went to bed I could have nothing to do with him. He gave up, and the fever was running its natural course. He had the red edged, pointed tongue of continued fever. Four days after he went to bed he had a most profuse hemorrhage and after the fifth he died, absolutely depleted of all the blood in his system. If he had gone to bed at the proper time I believe firmly he would have gotten well. All the doctors in Edgefield were called in to no avail.

Case 2d: B. H., age 21. One of the most powerful young men in the county, physically, had the ordinary prodromata, but fought it for at least three weeks. The consequence was he died of perforation of the bowels. I was called in the day before he died. Other doctors had been giving purgative medicines.

Case 3d: W. L., age 17, was convalescent from an attack of fever of mild type, ate a slice of fruit cake and died from intestinal hemorrhage, the case having assumed more serious enteric symptoms by this indiscretion in diet. I give quinia bi.-sulphate in the majority of my fever cases, not that I hope to cut off the attack but because I believe quinine is an antiseptic, a tonic and, I believe, a germicide, a stimulant and an excellent alterative. I usually administer in small doses, say put one ounce or one ounce and a half in a pint of water

with about an ounce of alcohol to prevent decomposition. This is given in teaspoonful doses until the case runs its natural course. If I can keep my patient's temperature below 103 degrees I do as little as I can in the way of medication, but everlastingly preach diet and rest.

From the history and general run of the above cited cases one would conclude they were typhoid in character. I fully realize how obscure and indefinite the symptoms of enteric or typhoid fever are in some cases. I hold that these cases were not typhoid. I am firmly convinced of the fact that there can be copious hemorrhage or perforation in continued fever and I certainly experienced these most unfavorable symptoms in these cases. In nearly all forms of fever we have congestion of the intestines and entire alimentary canal and when we have this I hold we can rupture the small blood vessels by too much and unnecessary medication &c.

A SURGICAL CASE.

Was called on the 15th of April, 1896, to see T. A., negro, age 27. Family history absolutely negative, with a very obscure personal history. Found him in very good general health, but much annoyed with about six inches of the tibia of the right leg projecting out a little above the middle of the leg. He suffered no pain, but the pus that exuded from the medullar of the dead bone was simply unbearable to himself and others. He claims to have had his leg broken about twelve years previous to the time he came under my care, and that the leg was not set right, and that the bone had projected out.

He experienced no pain except when the projecting bone was struck. I forgot to mention that I, after some time, found that he had had syphilis or something like it. My object was to remove the dead tibia which was acting as a foreign body keeping up the discharge. After three weeks of building up of the system by tonic and suitable diet, with Drs, Dozier and DeVore we chloroformed the patient and attempted to cut down on the dead bone. Much to our surprise we found the muscular portion of the leg almost in a state of petrifaction and utterly impervious to the cut of the knife, The only thing then for us to do, in order to remove the foreign body, was to chisel down through the hard leg or amputate the limb.

After some consideration we determined to try by force to pull the bone out. We adjusted a roller bandage around the bone as near as possible where it protruded from the leg and Dr. DeVore and myself pulled with all our might and main, and succeeded in pulling out about a foot and a half of dead bone. We were satisfied with this and dressed the opening or wound antiseptically, and put the negro on specific treatment.

About a month after, I discharged the patient, much improved in every way, with very little discharge from the leg, needing to be dressed only once or twice a week. His general health was much benefited. Now, what caused this peculiar pathological condition, I have never been able to discover, on account of the dense ignorance of the negro. I showed the case to one or two of my brother Doctors and they unhesitatingly said amputate, but I consider that I pursued the most conservative practice.

Some Practical Observations on the Nature and Treatment of Incontinence of Urine in Children.

By J. Howell Way, M. D., Waynesville, N. C.

This annoying affection of childhood can in common with disease in general, be most critically studied by a reference to the evolution of the physiological principles on which the proper performance of the functions of this part of the body is based. In adult life micturition is accomplished by the combined action of a voluntary and an involuntary system of muscles acting in harmony under the direction of a mental impression called into activity by a reflex influence from a more or less distended bladder wall. In the spinal cord (Budge quoted by A. Flint, Jr., "Physiology of Man',) opposite the fourth lumbar vertebra is located the genito-spinal center which presides over the contractions of the lower portion of the intestinal tract, the bladder and the vasa deferentia. This centre is in connection with the sympathetic through the ganglion corresponding to the fifth lumbar vertebra. In the early weeks and months of life prior to the more complete development of the ganglia of the higher nervous system, when all the body functions are dominated by the great sympathetic system, the function of micturition is performed almost entirely through the action of the involuntary muscles, hence there exists in the new-born babe a condition of practical physiological incontinence of urine, or eneuresis. This ready flow of urine is facilitated too by the fact that in early life the quantity of urine (Flint) is more than double what it is in the adult.

As development proceeds in the child the higher ganglionic centres influence bodily action more, the sphincters are called into

greater activity, and the condition of physiological incontinence, both of urine and fæces. passses away, never to return save under the influence of severe injuries of the brain or cord, or debilitating disease. By the end of the second year the influence of the ganglionic centres ovar the function of micturition should be complete. When the proper nervous development fails to take place, with the genito-urinary apparatus anatomically developed, we have a continution of the involuntary emission of urine. This may be limited to the waking hours, (eneuresis diurna), to the sleeping hours, (eneuresis nocturna) or the annoyance may be present during both day and night (eneuresis continua).

This functional weakness, due as it most usually is, to retarded growth of the higher type of cells in the genito-spinal center of the cord, may continue until the approach of puberty, when, under the stimulus of rapid growth imparted to the genito-urinary system, the delayed development takes place and a cure is effected. Rarely it persists beyond puberty. (Jacobi) cases of eneuresis most frequently come under the physician's notice from the middle of the third year to the twelfth of life. A greater number of boys seem to be affected than girls. This would seemingly be accounted for by the more direct closure of the female bladder and not to the difference in the size of the bladder, which would be in favor of the male. (Forcheimer.)

While cases are seen where the general muscular and nervous development of the child seems to be all that could be desired, yet it may be safely asserted that, as a rule, these little patients are most frequently more or less debilitated. Some are anæmic, some slow, dull and stupid, lacking in general nervous vigor of both mind and body, and feeble. Others are of the intellectual type, where nature has apparently neglected the physical in building up the mental; quick, bright, spirited, but easily tired children, with poorly developed muscles. Local irritations, stone in the bladder, a constricted or adherent prepuce, adhesions of the clitoris, vegetations about the urinary tract, the presence of ascarides in the rectum, rectal disorders, etc., etc., may act as exciting causes—the predisposition of a weak genito-spinal centre being present.

In the same way the scrofulous, anæmic, rachitic, or lymphatic types may favor the occurrence of the disorder. In this connection, however, it is well to remember that the general run of this type of children do not suffer from incontinence of urine. The lesions of the nervous system and the degenerations incident to old age, which are, as a rule, responsible for the incontinence so frequnetly observed in the aged, are, with very rare exceptions, never present in childhood. Conditions of the urine however do exercise an influence in the occasional production of incontinence of urine in children which should not be lost sight of. Diabetes Mellitus may also stand in a causal relation. Influences which bring an increased reflex irritability of the bladder, as the copious drinking of fluids, use of salines in general, inflammation along the genito-urinary tract, may, and do, at times, act as promoting causes of incontinence. The effect of "habit" when the affection has existed for some time, should be reckoned with as a factor in perpetuating the trouble. The frequent emptying of the bladder in vesical incontinenee prevents to some degree, the development of the containing capacity of the bladder, hence the trouble itself becomes a cause of its own continuance. According to Jacobi masturbation is a frequent cause of incontinence in children. "In the young the 'caput gallinaginis' is quite large, and Cowper's glands and the vesiculæ prostaticæ are sufficiently developed to result in erections. The constant irritation of the parts by self abuse leads to a chronic inflammation of the whole prostatic portion and the neck of the bladder, which is very sensitive." (Jacobi) Epilepsy, 'night terrors' and diseases of the spinal cord may produce vesical incontinence. Errors of digestion and assimilation which tend to load the urine with phosphatic and ammoniacal products aid in perpetuating the dieorder.

The prognosis in a given case of incontinence of urine in a child will depend largely upon our ability to weigh carefully the merits of the case. It usually disappears after puberty. If based on a source of local irritation (plus of course the weakness of the genito-spinal centre), which can be discovered and remedied, there is a favorable prospect of the abatement of the disagreeable symptom. In the absence of any source of peripheric irritation, or our inability to discover it, the prospect of early relief becomes much less, and the demand on our therapeutic resources correspondingly greater. The latter part of the foregoing sentence will also be applicable to the volume of patience necessary to be exercised by the parents or attendant of the little patient.

The treatment of incontinence of urine in children demands the most careful consderation of all the surrounding circumstances which may have an influence on the case. The diagnostic skill of the practitioner should be on the alert to discover and to

remove every possible source of local or constitutional irritation. Vesical or preputial calculi should be removed if present. Local inflammatory action along the genito-urinary or intestinal tract should be subdued. Neoplasms, ascarides, preputial or clitoridal adhesions should be sought for and if present released. If the prepuce be long or in the least degree contracted it will be well to circumcise. Even where there are no positive adhesions I believe it is good practice in these cases to remove the redundant foreskin. It lessens the liability to masturbation and removes a possible source of irritation. To enumerate, indeed, all the benefits of circumcision in such cases is simply to rehearse all the well known arguments in favor of the operation. The moral management of cases of incontinence of urine is of the utmost importance. Scolding and harsh measures sometimes ignorantly resorted to, by the parents, or the attendants, will avail nothing. The little unfortunates are not responsible for the unnatural activity of their detrusores urinæ musculares, or the delinquencies of their recalcitrant sphincters. Kindness mingled with positiveness should direct their management. Diathetic tendencies, anemia, scrofula, diabetes, phosphaturia, oxaluria, in short, every visible local or general irritation, should each have appropriate treatment. In certain of these cases remedies modifying the character and re-action of the urine find their place as useful agents. Ferruginous preparations, in general, are of value in the various constitutional irritations accompanying incontinence. In like manner arsenic, sea-bathing, massage and tonics have each a certain value. Attention should be given to the capacity of the bladder. Jacobi refers to a case where he with advantage practiced vesical injections to enlarge the capacity of the bladder which had contracted until capable of containing only a few drams of fluid. The ingestion of fluids in the evening should be restricted. The child should be encouraged to evacuate both bladder and rectum immediately before retiring. If practicable it is well to have the little patients waked at regular intervals for the same purpose.

The 'excito-motor' class of drugs have been found of most specific utility in incontinence of children. Nux-vomica has proved of value, but more especially strychnia which may be given in full doses three times daily, and an additienal dose on retiring. Good results have also followed its injection hypodermically in the perineum. Ergot and ergotin are also of use. Ergotin finds a special fiéld of usefulness when given by perineal hypodermic injection. Humulus has been successfully used and is well spoken of by Jacobi. Given in full doses at bedtime it has exerted a happy effect in subduing vesical irritation. Camphor and bromide of potassium are also of service, acting in like manner. The one remedy which has perhaps had more trials in incontinence than any known drug is belladonna and its active principle atropia. When given it should be used to the physiological extent: falling short of this, it is not likely to be of special value. Given to the extent of inducing decided dryness of the throat, it becomes our most generally useful remedy in this affection. Three doses a day with an additional dose on retiring is generally the preferable way of administering it. Atropia is, I think, to be preferred to belladonna itself, being as a rule better borne by children and having the additional advantage of being of uniform strength. Introduced by Trosseau, who adopted it from Brettonneau, the belladonna treatment has proved more satisfactory than any other single remedy. Ths farradic current, one pole applied to the perineum, the other to the pubes, the application to be continued from five to ten minutes at each seance, and kept up daily for several weeks, has produced some excellent results. It is well to bear in mind that any line of treatment must be faithfully kept up for weeks and often months before seeing decided results. Injections of nitrate of silver (grs. 10—31 to the ʒ) have been strongly recommended by Henry Thompson. The injections are made in the prostatic urethra on the same principle on which cauterizing injections are used in spermatorrhœa. Personally I have had no experiehce with the injection treatment, but if I were going to administer it I believe all the beneficial effects could be derived from a much weaker solution. Masturbation, when present, has special indications for treatment, and the possibility of its existence should be borne in mind. Mechanical devices for the prevention of the eneuresis, like the perineal injections, exert a certain mental influence which is salutary, but many of them, such as tying the penis, closing the meatus nightly with collodion, etc. are not only useless, but hurtful as well. Such devices as compelling the patient to sleep on the side can do no harm and sometimes are beneficial.

Finally it should be remembered that failing in our well-meant efforts to relieve certain cases of incontinence, we have still the growing changes of puberty to look to for relief: with proper care and skillful treatment, however, it will only be a small part of the cases which we shall be com-

pelled to consign alone and unaided to dame Nature for relief.

"Some Thoughts" on the Folly of It.

By Dr. Ben H. Brodnax, Brodnax, La.

I have often thought I would like to be a city doctor with plenty of money and then I could lay down the law to the one-horse backwoods doctor somewhat after this style, "aw-wa-doctor, you see, you don't tweat the right disease with the right medicine. You see, you tweat the wrong disease with the wrong medicine." But as I am one of the backwoods class I have to receive the injunction. I wish it understood that what I state is my own personal experience.

Brother Dabney, on page 406, quotes the death of one case by a dose of acetanilid. I have heard that one or two others had had some trouble with it, but am impressed with the idea that it was from an overdose in a case rather sensitive to its effects.

Here is a case I was called to see November 1st: A girl of 12 years had had the third dumb chill that morning. I was called at 8 P. M. I found her with high fever, and raving. Mother could not control her. Only a small portion of calomel had been given three days before, the fever running on up to nearly the time when the fever again returned. Her mother had been afraid to give her quinine. I gave her 3 grains of acetanilid, 2 grains of calomel and 10 drops of "chlorodyne" (Maltbie Chemical Co., which contains about 1-16 of a grain of morphine). In fifteen minutes she was asleep and perspiring. Gave her afterward two portions of 2 grainss each of calomel an hour apart, and left 3 grains of acetanilid to be given at 7:30 in the morning. She missed her chill, took acid iron tonic, and has had no more chills.

This is the fifth (5th) case within two weeks treated in the same way. I cannot understand on any other grounds, *than overdose*, why there should be any *fatal* cases. A physician in S. W. Kentucky writes me he has "been using acetanilid largely for seven years, and has yet to see the first untoward symptom." As to its being an antiperiodic, I have never asked any one whether it was or not. I was attracted to it by its reputed qualities, "*sedative, diaphoretic, diuretic.*" I have never even asked myself whether it was an anti-periodic. In fact I do not care whether it is or is not. I do know, however, that it aborts a chill, and stops a fever, in malarial subjects, in a very few minutes, and can be given where it is said quinine is unsafe, i. e., during the heighth of the fever. Also that in a few minutes the fever subsides and the sweat comes on; also that the fever does not return until the time of the next paroxysm, if at all. And right here the "pro-quinines" would show some wit if they were to *use acetanilid as a test* in fever, as to whether it was typhoid or not. In typhoid the fever subsides but rises again; in malaria it does not come on again.

What I have claimed for the treatment is

1st. It is pleasant to take.

2d. The dose is small and seldom has to be repeated except a few minutes prior to next chill.

3d. There has, in my practice, been no unpleasant effects of any consequence.

4th. There is no disorder of taste, hearing, or bodily feelings caused by the medicine.

Now compare it with quinine.

1st. Is quinine pleasant to the taste?

2d. Quinine has to be given between the paroxysms, and pushed to 2 or 3 doses, an hour apart, to abort the chill—9 to 30 grains is a minimum amount.

3d. I have not had a case of hæmaturia in my practice, by the use of acetanilid, in seven years, while before that, 1890, I had several every year by the use of quinine.

4th. Is it necessary to discribe the effects of quinine on the taste, smell, sight, hearing, brain and body?

If for no other reasons than the above, acetanilid should be prefered to abort a chill or stop a fever.

Also, I am told, "quinine should not be given during the chill; also, that it should not be given during the fever." Well, when in God's name should it be given?

Take the case cited in the first of this article, would a physician have given her quinine? Well, what then? I gave her a few grains of acetanilid and in a few minutes all of the unpleasant symptoms were gone. Mark the difference.

As to the microbic origin of diseases. Here is a clipping from the Daily Lancet of Oct. 16th, 1897:

Klebs-Loeffler Bacillus.—According to the London correspondent of Medical Progress, "The most humiliating comedown for the bacteriologist is seen in the attitude he is forced to sustain relative to the diagnostic value of the Klebs-Loeffler bacillus. This bacillus is now regarded as not at all diagnostic of diphtheria, and its presence is given no particular significance in this regard by any well-informed man in London."

What is the matter with the "Klebs-Loeffler" now?

Recently I saw where the same conclu-

sion has been arrived at in regard to the typhoid bacillus by distinguished English physicians, in whose hospitals were several cases of true typhoid *with none of the bacillus* to be found in *any of the cases*, and a London journal says, commenting on it, (and the Klebs-Loeffler failure) rather sarcastically, "what next?"

Here is an extract from the Lancet also:

Diphtheria Bacilli Without Diphtheria.—E. Miller has made cultures from the throats of all children who entered the children's division of the Charite in Berlin, with reference to the occurrence of diphtheria bacilli.

Among ninety-two children examined, twenty were found in whose throats diphtheria bacilli could be demonstrated, although no inflammation of the parts was present. In six of these children the bacilli were present on the day of their entrance, while the remaining fourteen became infected during their stay in the hospital. In one of the cases full virulent bacilli could be demonstrated during two months and a half, without any symptoms referable to their presence.

Two of the most beautifully constructed theories, tumbling to pieces and no one to offer a hand to help them! Now *if* (and I emphasize the if) there are *two* such common diseases in which the bacillus *does not*, as shown, play any very significant (diagnostic) part, let us suppose, for a moment, that the *plasmodium may also* be defective and why not? what becomes of the pet theory that the "quinine kills the bacillus in the blood?" Any one who took the trouble to read the articles of mine referred to by Brother Dabney, will see that about 7 grains of quinine *should kill all the bacillus in the blood*. Now I very much doubt if the quinine, *as quinine*, ever gets into the blood at all. Also, it is a well known fact that nothing exists or thrives without a medium in which to propagate. Remove the medium and the bacillus *must* leave.

Turn to page 56, No. 2, of Vol. 1, of "The Pharmacologist," and you will find the following, under the head of "auto-intoxication:" "Auto-intoxication, i. e., self-poisoning, may arise from perverted cell metabolism, or through deficient elimination of the ordinary waste products of cell katabolism, produced in regular course of functional activity, but which being (becomes) deleterious by reason of retention within the organism.

"It is, therefore, a matter of indifference, pathologically speaking, whether the poison is produced by the cells of the particular organ that is affected by the product, or whether it is evolved by cells in some other portion and carried to the part involved, by the vascular, or lymphatic system."

That is the ground on which I have acted in the "New Idea," (new at least to me). I have first, if possible, removed the cause of the trouble by cleaning the bowels thoroughly, using calomel because it is an antiseptic, and usually a safe medicine, for the purpose, knowing that constipated bowels precede chills and that no good came of any treatment until *they were cleaned out*. On the same principle, I cut off the material on which the bug lived and thrived, and it was compelled to vacate, *if it had ever been there*. I used the acetanilid, not because it was, or because it was not, an anti-periodic, but because it did *most certainly, and in every case*, abort the chill; the patient sleeping and perspiring, and waking up with all the unpleasant symptoms gone *in a few minutes*; also, a good sweat is a good eliminator of filth.

I gave the "acid tonic" (nitro-muriate of iron) because it acts on the liver, tones up the blood, thereby giving it a "boost" to enable it to get rid of the filth, helps the apetite and digestion, and is thrown off, in part, by the bowels acting there as an antiseptic. So far as theories or authorities are concerned I own up that I have very little respect for them if they run counter to my own personal, experimental, and proven knowledge. To me *one fact* proven, over and over again, for seven years in several hundred cases, is worth all the theories of plasmodium causation, &c., that could be printed.

The half ounce vial of quinine *is gone*. I sold it to a man who was passing through our settlement.

Also, that I am not acquainted with malaria except as I find it here in Louisiana and the south.

Also, referring to the last paragraph of Bro. D.'s article, "The question of giving quinine," I am not bothering my head at all about the "question." If it *is* such a *difficult matter to understand how to give it*, I let some one else tackle it. If I "must not give it in the cold stage, or in the hot stage," or "if small doses aggravate hæmaturia and large ones bring it on," so let it be. I don't want any of it at all in my practice, nor do I use it in malarial affections in any shape or dose.

I do use it in obstetric cases, as also in purely neuralgic cases with morphine, *occasionally*, but I find that bryonin and gelsemin cures them easier and quicker, and no unpleasant sequelæ. I have studied the "ifs and ands" of quinine for 45 years and am rather skeptical as regards getting a new

idea on the subject outside of Morehouse Parish, not being engaged in practice in South America, or the African coast.

I will allow that Brother Dabney has "*authorities*," a plenty, for his belief in the microbe idea; but if the authorities fail, as in the diphtheria and typhoid theories, so abjectly, what good are his authorities to him, or any one else?

I am told, by a writer, who lived several years in Africa, and studied the hæmaturia of that section that it is caused by a worm which he named a "filaria," the male and female being found in pairs in the blood, and that the individual affected seldom, or never, gets over it. He remarked that no treatment was of any avail—quinine failed entirely in these cases.

Now in this section the cause of the hæmaturia is weakened blood vessels, tense with the overflow of blood to the inside of the body and the stimulant given the circulation by quinine causes a rupture of the vessels themselves. I have only once had an opportunity of examining the kidneys, post mortem, and in this case one of the large veins was ruptured and inflammation had set up in the edges of the rupture. That quinine does do this I am satisfied every way.

As to the failure of quinine to do what is credited to it, here is the experience of a venerable ex-confederate surgeon located in Eastern Alabama: "It is so trying and perplexing to have a patient upon a quinine treatment, say to-day, and live in doubts till the next visit, to-morrow, and sure enough find a disappointment, is why years ago I dismissed its use and began to cast about for something that would afford more satisfaction."

My brother will see by this, and a hundred or more letters on file in my office, that there has been for a long time a wide spread distrust of the much bepraised drug.

Cure for the Opium Habit.

By W. T. Paul, Atlantic, Carteret Co., N. C.

So many physicians are asking through the different medical journals for a successful treatment or cure for the opium habit, I will give them my plan as I have treated with success in the last twelve months several cases.

You can send your patient abroad and have chloride of gold and sodium and atropia instilled into his circulation, (and perhaps he'll escape cyanosis and impotency) or if your patient is troubled with hallucination, or displays symptoms of insanity (for I believe all opium eaters are crazy) you can lock him up in an asylum for the insane, hastily withdraw the drug, and while the poor fellow is suffering the tortures of hell itself, a lot of ignorant ruffian gorillas, in the shape of attendants, can mock his cries of distress: or you can use the following simple, harmless treatment, which will also cure your patient.

Bear this fact in mind: In order to treat your patient successfully it is absolutely necessary to gain his confidence, and at the same time fool him a little, for the mind plays a very important part in this struggle for freedom.

Ascertain the amount of opium the fiend consumes at a dose, and prepare a solution of morphia sulphate accordingly. We will say an eight drachm solution, it may require ten grains or a drachm of morphine to eight ounces of water (let your patient procure the morphine).

When the heart's action lessens for the want of its usual stimulant a teaspoonful of the solution can be taken, and as often a teaspoonful of water added to the solution. In the meantime give the compound tincture avena sativa in 10, 20 or 30 drop doses, three or four times daily. This tincture is not a substitute for opium, but has a tendency to kill the desire for the drug, and is a splendid nerve stimulant and tonic.

After a while the morphine in the eight-drachm bottle will be gone—then the doctor should procure an empty morpine vial (label intact) put in the vial some quinine and let patient believe that it is morphine. Add quinine to the eight ounce solution—a comparatively clear solution can be made by the addition of a few drops of sulphuric acid.

Your patient will doubtless beg you not to increase the morphine; may tell you that he is feeling all right; no goose bumps; no gaping, sneezing, etc. Remind him that he is the patient, etc., and let him continue taking a teaspoonful and adding same quantity of water. Should your patient suffer with neuralgia you will find sedalgia the medicine for him. I am infatuated with sedalgia, find it superior to any of the so-called coal tar preparations. For insomnia give sulfonal.

Persist in the treatment and your patient will live to remember you in his prayers.

The medical profession recognize the necessity of correct diagnosis, but should not forget that the public estimate the doctor's skill, not by his familiarity with technical details, but by actual results. See to it that your prescriptions are filled as written.

Acquired Immunity.

Gottstein (Edinburgh Medical Journal) challenges the commonly received view as to the immunity acquired by human beings to second attacks of acute specifics. He considers it unjustifiable to conclude that because a man does not have an infectious disease twice he has become immune to it through the first attack; he considers this to be a result of the doctrine of chance, and points out that although the winning of the first prize in a lottery twice by the same person is practically unheard of, no one would think of claiming this as a case of immunity. The author dismisses the prophylactic action of vaccination on the ground that this is not strictly comparable with variolous inoculation, and states that Voges has shown that fowl cholera can lay claim to no specific immunising power, as the same immunity as that conferred by injection of attenuated cultures can be obtained by the aid of serum from healthy animals, and hence that the experimentally established immunity of Pasteur is simply a heightened power of resistance. Human acquired immunity should, according to him, be investigated without reference to experiments on animals. Gottstein proceeds to inquire as to which acute specifics are definitely held to confer immunity, and by collecting the opinions of various authors finds that small-pox, measles, and scarlet fever are alone universally stated to do so. As regards the first two, cases are not uncommon in which the same patient suffers from the disease twice or even more often, and the rarity of this is only in accordance with the law of probabilities. Three factors combine to add to this infrequency. First, many diseases, such as diphtheria, are particularly associated with the early years of life, so that when a patient is exposed to a second infection he has very often passed the age of especial liability. Other affections again, such as cholera, typhus, and recurrent fever occur typically in short infrequent epidemics, so that the subject has but little chance of meeting with them again. Lastly, and this is most important, deadly diseases such as cholera, diphtheria, and plague spare only those who are most resistant, in whom the probability of a recurrence sinks very low. The author then gives a number of examples of the repeated occurrence of infectious diseases in the same individual, and enters into elaborate statistics to show that the frequency of such repeated infections is actually in excess of what might be deduced from the calculation of probabilities. Thus he quotes from Maiselis statistics of 33 second attacks of scarlet fever, 37 of measles, and no fewer than 514 of small-pox, and refers also to the recurrence of syphilis and of whooping-cough. He next attacks the current views as to serum immunity, referring to the experiments which have been made to show that the serum of newborn babies and adults who have never suffered from diphtheria exercises a protective influence in guinea-pigs against diphtheria toxin. He further points out that, according to Weismann's theory, acquired immunity cannot be transmitted, and hence will not explain family and racial non-susceptibility to disease. This is really a heightened power of resisting resulting from the elimination of the weak in the struggle for existence. He finally suggests that in many of the exanthemata the true cause of immunity may be hardening of the skin, following the rash and preventing cutaneous infection. He illustrates this by the case of vanilla-workers, who, after once recovering from the eczema induced by their trade, are no longer liable to it.

Examinations in Sick Children.

The difficulties of examination are often exaggerated. (Boggess, in Pediatrics.) All necessary information as to beginning of the trouble, when and how taken, may be elicited from the mother by careful questions. Mothers, owing to their love and solicitude, are good observers, the doctor supplying all necessary gaps. The doctor should ingratiate himself with the child and gain its confidence.

1. Do not be abrupt or in a hurry; notice a child casually at first, then strip it and inspect every part. The tint of the face, the color of the lips, the general physiognomy, all help you to properly locate the disease. Blueness of the upper lip in early life is a common sign of labored digestion. Years ago it was pointed out that certain lines or furrows in the face of an ailing child, by their position, indicated the seat of the derangement.

(*a*) Occulo-zygomatic line denotes diseases of the brain and nerves.

(*b*) Nasal denotes abdominal mischief, gastro-intestinal trouble.

(*c*) Labial shows diseases of lung and air passages.

2. Shape of head and limbs, attitude, cry, absence of tears, condition of fontanelle, etc.

3. Pulse, respiration and temperature.

4. Dietary habits.

5. Carefully inspect the ejecta from stomach or bowels.

6. Genital organs.

7. Rectum, etc.

DIURETIN-KNOLL

A TRUE DIURETIC.

DIURETIN is a pure diuretic, and acts by stimulation of the renal cells and renal parenchyma, increasing the flow of urine even in those cases in which the heart muscle no longer responds to the usual cardiac remedies.

DIURETIN is indicated in all cases of dropsy arising from cardiac or renal affections.

It possesses *no toxic properties*, and can be administered in large doses for a long period without fear of consequences, or acquirement of a habit.

It is frequently very active even where digitalis, strophanthus, etc., have failed.

The most excellent results are obtained in *cardiac hydrops*, but in *chronic nephritis* also, the action of **DIURETIN** is in most cases superior to that of all other diuretics.

DIURETIN-KNOLL is a white powder clearly and readily soluble in distilled water, forming a permanent solution.

The best mode of dispensing it is in a mixture or in capsules, in doses of from 10 to 15 grains.

Sample and Literature free, on application to

McKESSON & ROBBINS, New York.

IN BURNS

Oil is wholly wanting in germ-destroying properties.

Creosote, Alcohol, Picric Acid and Iodoform have their advocates and their proper uses. They have their drawbacks, and under most circumstances are objectionable.

Creolin is only useful in burns of the first degree; in those of the second it is not as beneficial as Bicarbonate of Soda.

In burns of the third degree all the above are useless. Unguentine has healed such where there were large open surfaces without a scar, for which at first skin grafting was thought to be the only hope.

WAUGH says: "One cardinal principle should be remembered in treating burns—keep out the air and its accompanying micro-organisms."

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THE

Charlotte Medical Journal.

E. C. REGISTER, M. D. J. C. MONTGOMERY, M. D.

Editors and Publishers.

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MEDICAL ETHICS.

The college student, or any student, contemplating the study or practice of medicine, often fails to conceive the ethical requirements of the medical fraternity, and it is a sad fact that even many physicians desirous of reputation and popularity, become heedless of those fundamental principles which tend to ennoble, enlighten and bring dignity and honor to the medical profession. No reasonable man will deny that any knowledge, whatever, for the relief of suffering humanity, should be other than knowledge to be held in common. But the very reverse of such a condition is plainly apparent, and is a menace to the honest practitioner.

The following is a portion of the Code of Ethics adopted years ago by the American Medical Association, which all honorable physicians, especially those worthy of membership in a medical society, are asked to observe:

1. "It is derogatory to the dignity of the profession to resort to public advertisements, or private cards or hand-bills, inviting the attention of individuals affected with particular diseases, publicly offering advice and medicine to the poor, gratis, or promising radical cures, or to publish cases and operations in public prints * * * and to boast of cures and remedies * * * These are the ordinary practices of empirics and are highly reprehensible in a regular physician.

2. "Equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument, or medicine; or to dispense a secret nostrum. For if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice."

But is it dishonorable to a physician to advertise? If it be considered so by a fraternity of doctors, how shall he bring himself before the people? The answer is simple and reasonable. The merchant advertises to healthy people capable of clear judgment concerning the articles sold; while the advertising quack takes advantage of a diseased body with a usually more or less perverted judgment. It is seldom a difficult matter to convince a sick man that his condition is many times more serious than it is in reality, and the advertisement always hints at a very bad physical condition.

The intelligent physician is supposed to study his patient not only by hearing what is said of him, but, if necessary, by making a physical examination of any or all the organs of the body, sometimes even a chemical or microscopical examination of the bodily secretions—as the blood, the sputum, or the contents of the stomach or kidney.

This the patent medicine men or newspaper advertisers seldom do. On the contrary, they usually inquire into but one or two symptoms (and as narrated by the patient, these are often misleading) and then they immediately suggest a serious condition to one who, being ill, physically, and consequently, perhaps mentally, easily falls a victim to their charlatanry. Being superficial in their diagnosis they are also superficial in their treatment, as invariably one or two remedies or methods of treatment are advertised with which they promise to cure all the woes and ills of mankind.

Quackery, advertisements and "secret nostrums" being thus "reprehensible to the regular physician," (and to whom should they not be?) there is no other course for him to pursue except to guard well the duties entrusted to him, and hope that merit will have its reward. This, of course, is slow business to the "new doctor," but it means honor, self-respect and perhaps an equal prosperity in the end. Eventually also, the invasions made by quackery upon honest professionalism will be reduced because legislation is already demanding and protecting a higher professional standard.

Think of such men as the late Pasteur, eminent in medicine and science, of Drs. Simpson and Morton, demonstrating the use of chloroform and ether, of Joseph Lister, teaching the value of antiseptics in surgery, of Germany's Koch, among the first to find in bacteria a cause for disease, and of Prof. Roentgen with his X rays; and compare if you will, their value to mankind in contra-distinction to men known only by newspaper advertisements and patent medicine labels. The memory of the former will last throughout the ages while that of

the quack will pale with the ink that gives him prominence.

Without professional liberality we should have no system of precepts and principles, no scientific knowledge to be imparted to students in medical colleges, a higher standard of which even the intelligent public is demanding. A good example of ethical liberality in medicine is the principle and practice of vaccination, which protects millions from the ravages of small-pox. And further, does quackery dispense any knowledge about hygiene? Of recent years it has been especially studied by the physician, and is publicly taught, (but not advertised for the benefit of any single individual) and has become a great agent, not only to prevent, but also to cure disease. The use and value of diphtheria antitoxine were never increased through a single individual's advertisements, nor are they withheld in secret from any physician.

It will thus be seen that the disregard of ethics in medicine is a provoking obstacle to the dignity of the profession, but so long as people will be deceived, as it seems they love to be, the present condition is likely to exist. We would, however, in no way discourage an ambition for the study and practice of medicine. Other professions and occupations have similar and perhaps greater reverses, while the medical profession in the purity of its motive, and the grandeur of its purpose is second to none, though it is certainly not the most promising for financial prosperity.

Side by side in West Laurel Hill Cemetery in Philadelphia are two vaults. The one contains the body of Bishop Simpson, a man well known to theologians, the other protects the remaint of Dr. Agnew, one of America's greatest surgeons. Both labored for the cause of humanity, both were teachers of great renown, both were true to the principles of their profession. Standing in the presence of their dead bodies it is impossible to point to either and say "he was the greater."

Few men are called "great," but every physician true to the ethics of his profession ought to be worthy of the epitaph on Agnew's tomb: "Like his Master, he went about doing good."

A PHYSICIAN'S DUTY.

The physician is supposed to be the guardian of the public health. It is not alone his duty to attend his patients in attacks of sickness, but it is as much his duty to advise and protect them in health.

Much of the pamphlet and newspaper advice that is heralded so widely and under glaring head lines is nothing more than the shrewd and unprincipled way of some rascal to bring himself before the public, and get susceptible people into his clutches.

Often we see some poor, weak minded young man who has practiced self-abuse come trembling into our office and ask for a private talk with us, and on entering the consultation room he will glance around to see that the doors are all securely fastened and the first look he gives his physician is more like that of a hunted animal than of a human being. Coming close to you he begins in that hoarse whisper that you have all heard and says "Doctor, I am an awful wreck."

You ask him his reason for thinking he is such an awful wreck and he will with a good deal of hesitancy tell you that he once abused himself and now his manhood is lost and he wishes he was dead.

He then tells you about reading this wonderful book by some great specialist that calls himself "the benefactor of mankind" and his course of treatment from him and his money gone and himself getting worse.

You ask him how he was before he read the article by this noted specialist and he will tell you that he was able to work, but not strong enough and vigorous like other men. In fact he had that tired feeling, and this great, learned specialist told him in a few words just how he felt and told him the whole cause was this vicious practice he had beenguilty of, and that he had wrecked his whole nervous system, and unless he immediately sent him $25 or $30 for his special treatment he would be damned here and hereafter, and consequently he makes such an impression on that weak susceptible mind that he makes a mental wreck of him, and nine times out of ten his treatment of the case is only to make it worse. Had that young man gone to his family physician, which he would have done had it not been for this advertising charlatan, and told him his troubles, a little kindly assurance and something to tone up his general system would have prevented all this shock.

We need general laws to prohibit physicians from advertising in such a way. The public can put up with a merchant that advertises to sell a $50 suit of clothes for $25. If he cheats the man it is simply a loss of dollars and cents, but when a man goes to another and by his power and eloquence so plays upon the mind of another as to wreck his life and also take his money it needs just laws to prevent such.

As honorable physicians it is our duty to give such advice as will prevent these charlatans from getting hold of susceptible

victims and labor to have laws enough that will suppress such quackery. These advertising specialists take out of the pockets of the people thousands of dollars that it would have been better they had stolen, to say nothing of the mental wrecks they make.

RADICAL AND UNWARRANTED EXPRESSIONS.

Either ignorance, thoughtlessness, egotism, or viciousness is responsible for many rash, radical and unwarranted expressions on the part of some members of the profession. Expressions which are frequently productive of harm to individuals if not to the profession in general. As for instance, "the accoucher who has a case of puerperal septicaemia to develop in his patient is guilty of mal-practice, and is morally, and should be legally responsible." This if not in the exact language, has in sentiment been uttered by physicians whose standing in the profession makes their opinions seem authoritative. We would not for a moment attempt an excuse for the ignorant or careless obstetrician. The man or woman who takes upon him or herself the sacred responsibilities of an accouchment without proper knowledge, or without using the most painstaking care possible to fortify the patient against all dangers, is unworthy a position in our noble profession, and should be held morally and legally responsible for the results of their work. That with the present status of medical skill and knowledge "puerperal sepsis" can always be avoided no one can claim. Facts will not justify such a declaration. The results of aseptic and antiseptic treatment compel us to admit that the cases resulting from autoinfection are comparatively rare. Nevertheless we believe they do occur. Even however, if all cases were heterogenic it would be unjust to hold the practitioner criminally liable. The highest skill will not and cannot always control the conditions of contact and environment. Consequently the most reputable and conscientious practitioners are occasionally compelled to witness a patient succumb to this virulent condition. If ever any fact in medical practice was thoroughly demonstrated, however, it has been proven beyond reasonable doubt that aseptic midwifery does not only reduce the rate of mortality from but, as a rule, prevents the condition of puerperal sepsis. It seems therefore scarcely possible that we have to-day in the ranks of our profession men who ignore the teachings of modern obstetricians. Investigation brings to light, however, the fact that numbers of practitioners practice day after day without regard to aseptic midwifery. In view of this might it not be well for our State Examining Boards to demand a "confession of faith" from those seeking a license to practice medicine?

ANTITOXIN FOR DIPHTHERIA.

In spite of the most persistent conservatism the old style "expectant" treatment for diphtheria must go. The consensus of opinion of those men who establish truth, is, that quinine is no more clearly indicated for malaria, nor the salicylates for rheumatism, than is antitoxin for diphtheria. It is a fact that not more than four or five names, among those still in the opposition, were known before the discovery of antitoxin. The grounds of the opposition may be reduced to two points: First, that it is a dangerous remedy. Second, that no better results are obtained by its use than were formerly obtained without it.

Already more than a million injections of the serum have been given. Five deaths, immediately following its use, have been reported, the causes of which have not been satisfactorily explained, for want of sufficient data. Neither has antitoxin been proven to be the cause of death even in these cases. As much as 6,000 units have been given in a single injection, and as much as 16,500 units have been administered in one case during the course of the disease with no untoward results.

Statistics necessarily vary. The most favorable have been given by Dr. L. Emmett Holt, of New York, who states: "That in cases injected during the first two days, the mortality is less than 5 per cent." As this estimate, though coming from high authority, exceeds the opinion of the majority of observers, credence of it may be excused. However, the report of the American Paediatric Society, given May 4th, 1897, furnishes indisputable testimony. In order to eliminate all possible sources of error, there were accepted in the report only well authenticated cases of laryngeal diphtheria, which are well known to be severe and do not recover spontaneously. In contrast to the former estimate of 10 per cent. of recoveries without operation, the present report shows 82.82 per cent. of recoveries. Among the operated cases, in which the test is more severe, 24 and 27 per cent. of recoveries were formerly estimated to be good results. Now the mortality of operated cases is 27.34 per cent., or in other words the percentage of recoveries is 72.76. The cases included in this report represented 422 physicians from 22 States, the

District of Columbia and Canada, and occurred during eleven consecutive months.

Such has been the record of antitoxin in the past. The future promises still more. Its general acceptance insures its earlier and repeated administration, from which may be expected a reduction in the general mortality from diphtheria to less than 5 per cent., and in that from the laryngeal form to less than 10 per cent.

THE TONGUE.

The members of no other profession or calling have a better opportunity, perhaps, than the observing physician, for the study of human nature and the classification of the primal elements which go to make up character. Along with certain types of character may be seen certain physical accompaniments representing the degree of cultivation attained by the individual. Among these the tongue, the little "root of so much evil," should not be entirely forgotten. From time immemorial it has been looked upon as an indicator in certain ailments and diseases. The practitioner looking at many tongues in a day may also see in it an index to temperament and character.

The typical nervous, or nervo-sanguine temperament, quick in action, quick in thought, will often display a thin, narrow tongue, of fine fibre. This is the class among whom may be found the representatives of culture and refinement. It is the tongue of people who have advanced in civilization, and have pruned down their baser instincts through generations of effort until by reason of education and discipline, the product is more finished, polished and approximates the highest type of which man is capable.

Contrast, on the other hand, the phlegmatic type with broad jowl, short neck, and usually thick set. He usually has a heavy, rough tongue, wide from side to side, thick and coarse. Among this class will be found butchers, prize fighters and representatives of the coarser element generally. Along with it may go goodness of heart, often generosity and frankness, but it will usually be in company with men of sensual instincts, lack of refinement, and an inability to appreciate the finer more æsthetic side of life in which men of letters, artists, connoisseurs, and the cultured generally, find their greatest pleasures.

With the tongue go also many other physical characteristics which mark the individual. The features may be delicate and small, or coarse and large; the frame lithe, or awkward, the bones well modeled and small, or big and brawny, etc. Life to the coarse tongued type is the gratification of appetite. He revels in eating, sleeping, and the mere animal pleasures of man. To the finer tongued there is a world above and beyond the sensual. His highest enjoyment often rests in the pursuit of knowledge, the appreciation of the fine arts, the delving into the beauties of science and philosophy, and the satisfaction of purely intellectual activity. Between the types here represented, however, will be found an infinite variability of crosses and degrees and mixtures representing as many phases of character, the tongue standing as one of the indicators by which the predominance of sensualism or refinement may be shown in the individual.

AN ABUSE OF CHARITIES.

A reformation in the hospitals and free dispensaries of this country is sadly needed. Careful inquiry develops the fact that a large majority of the free patients are of that class who could pay moderate fees, and a large percentage are of that class who are abundantly able to pay any reasonable fee which might be exacted of them. This is an injustice to the charitable through whose gifts these institutions are enabled to exist, and to the physicians who give their valuable time and professional skill gratuitously. It is an injustice also to the recipients. It degrades them morally and lessens their self-respect.

Again, it is an injustice to the medical profession at large, by robbing them of practical work and of remuneration to which they are morally entitled. The medical profession is a charitable one. Its services are always given gratuitously without grudging to the worthy poor. Because of this benevolence, their services are not valued in a pecuniary sense as they should be. Legally every man can do with his services and means as he may please so long as they are not used for criminal purposes. Morally he has not, however, this right under all circumstances.

A young man in accordance with the demands of modern medicine expends valuable time and money in procuring an education as a physician. In most of the States his fitness must be passed upon by an examining board before he is permitted to enter upon the practice of his profession. After these demands are made upon him no man nor any class of men have any moral right to conduct an institution in his community under the guise of charity which will deprive him of work and fees which he might honorably claim. Physicians who

lend their services thus cheaply to an institution are in a sense enemies of the profession and of society, because they are depriving their professional brethren of a means of livelihood and are assisting in making pauperism respectable. We do not deny but that they are actuated by the noblest and worthiest of motives and that in so far as their services are given to the truly needy they are performing God's highest work. We claim, however, that they are as well engaged in perpetuating an abuse which is a disgrace in this enlightened age, and it becomes the members of the profession to a man to speak out at once and in a manner which cannot be misunderstood regarding this desecration of charity.

DODGING DEATH.

Apropos of the sporadic Yellow Fever invasion in the South with its attenuated virus, and the extensive hegira, we see human nature at its worst. The foolishness of it all! Citing the city of New Orleans, with its population of three hundred thousand, as an object lesson, there have been, approximately, one thousand cases, and one hundred deaths, a mortality of ten per cent. The outbreak was not until fall, and there was never any real danger of an extended epidemic. One in three thousand of the entire population attacked, and one-third of one per cent have died. When we consider the great numbers that develop phthisis, and that fifteen per cent of all deaths that occur in this country are due to that disease —that pneumonia the most prevalent acute disease has a mortality of often twenty per cent., and that the death rates in some American cities, from all causes, reached the enormous ratio annually of twenty-five in every thousand, we have an illustration of the folly of the fear. We have named only two of the thousand ills that flesh is heir to, some one of which will surely close our mortal account, and when we figure on the chances in the game of life and death, this helter skelter flight becomes a mere shuffle against loaded dice, a juggle with the inevitable, an attempt at playing hide and seek with the Lord's High Executioner, with a one-sided hiding. The craveness of it all! Doctors, in search of scientific facts driven back by bayonets. Every day, on every train, *out* of the jaws of death rode the six hundred. Well for the shot-gun brigade to corral the cowards! We read of a husband fleeing from the sick wife, and of mothers leaving their little ones to the care of hired hands. A man, ill with malaria, put off a train in a Kentucky town, refused a shelter, found refuge in a barn, where a mob of so-called human beings sought to burn him, and were prevented by the owner who held them off with a rifle. The pastor of a fashionable church, native of New England, in simple duty returned to his flock from his summer vacation. He caught the fever, recovered, and forthwith is held up as a hero. We pause to ask after the medical profession in many a fearful scourge. Who measures their action at more than duty? Who heralds the heroes? When the exaggerated alarm was sounded this summer, they stood "firm like a stone wall;" when the calls came, they stood not upon the order of going, but went. Like Beauregard, on Manassas bloody field, leaping from their steeds among the stricken, by their action proclaimed, Brother, we "have come here to die with you," if need be. And some have fallen in the fight. Reverently thankful are we for our medical martyrs. Living, they taught men how to die; dying, how to live.

OUR MEDICAL COLLEGES AND THE SUBJECT MATTER OF STUDY.

The editor of the Medical News, in his article of October 2d, 1897, on "The Present-day Method of Teaching Medicine." took occasion to vilipend the majority of medical schools and teachers in this country and to criticise generally the product of evolutionary changes in medical instruction.

The establishment, in old centers, of superfluous medical schools, or of new educational institutions of any description, without adequate equipment and competent teachers, is, as he implies, to be deprecated. Far greater returns would be given by collaborating with already existing institutions. In newer and distant communities, however, new schools are indispensable to the wide dissemination of knowledge, both general and technical. All can not drink from one spring. Other springs must be found. It must not be accepted without more than mere assumption, however, that endowed salaries are essential to successful work; that indirect remuneration is incompatible with the "nobleness" of teaching and the exhibition of that "interest" without which the students work will be a dreary maze. The fact is that incompetent teachers may be found in every school, and some are even well paid; that all good ones are not on the "rostrum" or behind the desk. Furthermore, the characteristics of a good teacher are more likely found in the man at work than the one on parade. With the former the cold bare bones take on "interest," and life and meaning. His zest and sympathy aroused by his near approach and

actual presence with real and not fancied existence, cannot from the very nature of things, be generated *de novo* in the study room. Truths are never fully understood and appreciated until self-demonstrated in actual experiences.

The character and extent of the subject matter of study should be determined not simply by the principles of the subject, but rather by the needs of the student and "sometime doctor." This is a practical age of a practical world. The recent graduate is confronted with the same conditions that face the old doctor. They are placed on the same footing, less the experience of the latter, which can not be acquired second hand. The student then should go out like a thorough artist, familiar with all the details of his work. This will include facts, "tricks," if you like, as well as principles. In truth principles are never seen except as exemplified in facts and can never be learned and understood without them. Medical knowledge has been wonderfully transformed within the past few years. Some untruths have been discarded. Many new truths, even whole sciences, have been uncovered and understood. A little more extended observation, than the editor has obviously made, will convince him that medical faculties have appreciated these changes and with commendable zeal and pride are as fast as possible extending and systematizing their courses of study to meet the growing demands of the "sometime doctor."

WET DRESSINGS.

Wet dressings may be made in two ways, first, by saturating the gauze with an antiseptic solution (preferably a sublimate solution 1–1,000, or a carbolized solution 1–40) before applying it to the wound and then covering this completely with gutta-percha tissue, or oiled silk, being careful not to let the gauze protrude at any point, as it would soon drain the dressing, making it a dry one, then bandaging it snugly so as to keep the gutta-percha tissue or oiled silk in contact with the integument at all its borders thus making the dressing air-tight and preventing any evaporation of the solution. This dressing makes a good antiseptic poultice. There will be some who will say that it affords heat and moisture to the wound, both of which invite the growth of bacteria. This is true, but no bacteria can multiply or even live for many minutes in the above mentioned solutions at any temperature. It should be changed, however, at least once in twenty-four hours, as a great deal of perspiration is given off into it and it soon becomes filthy from the discharge of pus. This dressing was very popular a few years ago, but has fallen somewhat into disuse. I think the reason for this is because they were not changed often enough, and hence the results were not what they should have been.

The second way of applying them is to put on the gauze and so arrange the bandage that you may pour in the solution often enough to keep it moist. The first way is the better of the two, but either is preferable to a dry dressing when you have an infected wound to deal with. Your solutions will penetrate deeper than any dusting powder you can employ.

In non-infected wounds, without denuded surfaces, the dry dressing is always to be preferred, but the old practice of dusting powder in these should be avoided. To sum the whole matter up, use moist dressings in suppurating wounds and dry dressings in non-suppurating ones.

WHAT MAGNIFICENT POSSIBILITIES HAVE OUR AMERICAN BIOLOGICAL LABORATORIES.

While it is well to develop foreign ideas is it not wiser to develop American ideas, not only as here is the place to do it and then foreigners would better know the peculiarities of the new world, but also this course would develop better ideas in medicine, in our judgment, and more patients be cured than now. The great work of the profession is to heal the ill if possible. Some of the best American ideas are in relation to dietetics. Many years ago S. Weir Mitchell, M.D., PhD., of Philadelphia, and Sir B. W. Richardson, of London, showed that frogs immersed in a saturated watery solution of common sugar would develop cataracts in both eyes in an hours time and quicker than that by hypodermic injection of a drachm of the same solution. The writer has verified the former. He finds the degeneration to be fatty as in common cataract—that the frog's cataracts would almost disappear in twenty-four hours after death, as did the first observers. In man per contra this degeneration goes on after death, sometimes, as in adipocere. Now what is needed are like experiments on man especially the hypodermics. To be sure we have experimented on man by following out the cue given by Dr. Mitchell and Dr. Richardson and we have cured eye cases satisfactorily. But when wealth is lavished and honors are heaped on Biologists in Laboratories, it is but just to the rich donors and poor suffering humanity that the mat-

ter here stated should be put in a position beyond controversy, and that all the profession should administer this blessed knowledge to those in need. Healthy men should be fed as long as possible on single foods with water, coffee or tea, and observe the results. We think that oat meal for one would take the back track. Asparagus also. Beef and wheat would be at the front of all foods. Although glorious results have been attained, still to most people these words are as "idle tales." But laboratories sustaining these results would diffuse these blessings far and near.

ACTUAL PRACTICE VS. ROUTINE WORK.

In the practice of medicine there is much to consinder besides the visiting, examining and prescribing for patients in a routine way, in fact it is frequently the routine doctor who is most often disappointed becauss he does not get the expected effect of his drug. Routine work in making visits, or examining patients, or in making out prescriptions is really to be deplored. The day is past if it ever actually existed where a physician can visit every sick chamber in the same manner. He cannot continually wear the dignified wiseacre face that so many try to assume and which is so very unnatural to the intelligent physician. No, he must *study* the mental as well as the physical, and by a frank, free, prudent demeanor be enabled in that way to administer to the mental, while his drugs, if they be needed, aid nature in putting the physical aright. I was surprised a few months since to have a bright young physician to ask me to write him "my favorite prescription for pneumonia." I was compelled to acknowledge that I had no favorite prescription, but that each case of pneumonia, to me, was a separate study, and upon the result of such study the prescription evolved. While it is true that we expect to meet certain conditions, yet it is not true to such certainty that a given prescription could be recommended indiscriminately.

Again it is unfortunate that physicians fall into the habit of prescribing drugs or combinations of drugs without *any special reason* to have the *effect which will likely be* produced, An experienced practitioner recently said that when he saw a case that puzzled him he would invariable give "a dose of calomel for a sounder," even when there was no reason whatever for a mercurial purge. When we visit a patient let it be *the* visit for that *special patient;* when we examine a patient let the examination be made to satisfy us as physicians and not to try to impress the patient with our knowledge or skill, and when we prescribe let us do so in order to get the effect of the drug prescribed for a specific purpose and not as a matter of habit.

SUTURES AND LIGATURES.

Asepsis and antisepsis has revolutionized medicine and surgery more completely than any other discovery, even anæsthesia. Among the many changes "rung in" are the choice and preparation of suture and ligature material. The surgeons of bygone days regarded the choice of material as comparatively insignificant, and its mode of preparation of little importance. In other words "any old thing" would do. With some this is all changed; with others it is changing. Instead of being inconsequential, the choice, and especially the preparation, of sutures and ligatures has come to be of the greatest importance, and, in general, the more successful the surgeon, and the busier he is, the greater importance does he attach and give to such details of his work.

The present status of this problem may be stated thus: Ideal suture material must possess the following qualities: First, it must be capable of being rendered perfectly aseptic; that which can be safely prepared most easily and readily by any one best fulfills this condition. Second, it must have sufficient strength; a method that vitiates this is unsatisfactory. Third, it must be of comparatively small size. Fourth, for all buried work, whether for suture or ligature purposes, it should be absorbable. By universal consent silkworm gut best fulfills the first three conditions and is, therefore, the ideal suture for closing external wounds. It is safely prepared, and as easily and readily as instruments by boiling in water. For buried work the choice lies between silk, catgut and kangaroo tendon. Silk, like silkworm gut, may be prepared by boiling, and the absorption of fine twisted silk will cause no trouble. Catgut and kangaroo tendon both require more complicated and tedious methods. The material from the shops is rarely used by surgeons with large practice. They depend upon no one but themselves. This is a valuable hint to others with less experience.

The problem is thus reduced to the following conclusions: Prepare your own material. Use silkworm gut for closing external wounds. For ligature and buried suture purpose, if you are not willing to take the most extreme pains in preparing your own catgut or kangaroo tendon, use fine twisted Chineese silk. If you are wil-

ling to prepare them with the necessary care, use catgut or kangaaoo tendon as your judgment may dictate. These are slightly advantageous over silk in their absorbability, but their preparation will always carry with them an element of uncertainty.

PHYSICIAN'S INFLUENCE.

It has occurred to us many times in the past that physicians do not pay enough attention to the influence on their business, of the conduct of themselves and their families; with this in view we wish to call the attention of our readers to this point. In our estimation a physician practicing outside of the larger cities must be a married man, in order to be a success, and must have for his life partner a woman who is discrete, for even though he tries to keep separate his professional and home life many things are repeated as coming from the doctor's wife, "and of course she knows," which become so distorted in the rounds of gossip that the patient's family on hearing them will "never want that doctor again." They must have, for their home, a place easily accessible by day or night, and no matter how inexpensive the furnishing may be, the house must look neat and clean and well cared for, as must the person and family of the physician, for they must associate with the best people in the community in which they live. All should be well informed on the topics of the day and able without posting up to give an intelligent opinion on many of the little questions which are constantly coming up; this can be accomplished by free discussions of the topics of the day by the doctor and those members of his family mature enough to comprehend, much of which must take place during the short time allotted to meals where, around the family board, each may relate their experience of personal encounter with the world outside or reading culled from books, magazines or papers. We repeat then that the doctor must, to be successful, be a leader of thought in his locality, and in order to have the help of his family must bring them up on the same high plane. The best clothes which he can afford, made up by the best tailor in reach, is none too good if he would make a favorable impression on the public in general; but more than this will the influence cast by the evidence of a bright mind, well stored with information on the subjects of the day, outside the pale of medicine, clean, well kept clothing, of person and family, and conduct becoming a gentleman whenever and wherever met, bring into his hand the dollars so much desired.

INORDINATE CRAVING FOR TOBACCO.

We are all well aware all sorts of nostrums have been proposed and tried for the purpose of curing the excessive craving for tobacco; but still the results of their administration have been for the most part very uncertain. Now for the latest. A remedy of a different order has been patented in the shape of a time lock for tobacco boxes. The victim of the habit can adjust the torture of deprivation to suit his moral and physical limitations. Having made up his mind what is the longest period that he can abstain from the weed, he sets the gauge on the box and waits for the expiration of the pre-determined interval of time before he takes a fresh chew or fills up his pipe. What will be the next? The inventor, so it is said, goes on to speak very feelingly on the subject, recommending the sufferers from the nicotine habit to make the early intervals very short, and to increase them gradually until the yearning for the weed has been trained down to the vanishing point.

TOO FREQUENT DRESSINGS.

The *zeal* displayed by some medical men in the frequent ablution and dressing of wounds, either from injury or after operation, is commendable, but the results are not infrequently condemnable. It is not uncommon to see wounds given from one to three daily washings with a weak carbolic acid solution, say 1 to 400 or 500, presumably as a means of disinfection. Such treatment is productive of anything but satisfactoty healing or union by first intention. The irritation incident to the frequent douching or washing and removal and application of dressings, is of itself a hindrance to prompt healing. But of more significance than that, is the probability of infection occurring. 1st. Simply as an incident to the opening and exposure of the wounded surface. 2d. By the introduction of infectious material with the water, that used often being raw cistern water with a few drops of carbolic acid in it. There is a wide-spread delusion, not confined to the laity, that "soft water is purer than hard water, and that a few drops of carbolic acid will disinfect, or purify as it is called, an unlimited amount of water and render it capable of disinfecting any infected area.

Let the doctor who has the care of wounds remember; 1st. That dressings should not be disturbed except for some special reason, such as being soiled by discharges or otherwise and there being indications of infection. 2d. If the surgeon

works with clean hands and instruments, and has rendered the field clean both mechanically and bacterially, and applies an aseptic dressing, there will probably be no need of disturbing the dressing for a number of days—in the case of sutured wounds, not until time to remove the stitches. 3d. Every doctor should train himself as soon as possible to discover, by general symptoms, without looking at the wound, when anything is going wrong with it. He will thus save himself much anxiety and his patient much annoyance, as well as time in recovery.

A STUDY OF THE STRONTIUM SALTS.

In the American Therapist for August, there appears an article entitled "A Study of the Strontium Salts," by Dr. Leon L. Solomon, of Louisville, Ky. The article contains an error which it is perhaps well to call attention to, especially as Dr. Solomon's position as a teacher should give weight to his statements, and also because the profession at large is not likely to notice a mistake, the recognition of which would involve some knowledge of chemical combination.

After discussing the history and preparation of strontium, the writer goes on to say:—

After all, though, it is not the potassium, or the sodium, or the strontium whose effect we especially desire in giving any of these preparations. It is the bromine and the iodine, the lactic acid, the salicylic acid, the phosphoric acid, the arsenic, etc., whose physiological effect is sought. And this end is best attained when the strontium compounds are used, not only because these salts are less irritating than the identical combinations with potassium and sodium, but because the valence of strontium permits us to give each time just twice as much bromine, iodine, arsenic, salicylic acid, lactic acid, etc., as is possible with potassium or sodium salts. Remember strontium has a combining number of 'two' —Sr^2, while potassium and sodium are univalent, viz., have a combining number of only "one"—K^1 and Na^1.

If we bring bromine or iodine in contact with strontium and make them unite chemically, we have a chemical formula like this, $Sr^2\ Br_2{}^1$; that is to say, it requires two atoms of the univalent bromine to satisfy the one bivalent atom of strontium. On the other hand, when bromine or iodine are made to combine with potassium or sodium, only one atom of the bromine or iodine is required to satisfy the univalent atom potassium or sodium. The value, then, of the strontium combinations and their superiority over the equivalent potassium or sodium salts, from the standpoint of the increased amount of bromine, iodine, etc., which they contain, must at once be evident."

Now this would all be well enough if strontium, potassium, sodium, etc., possessed the same atomic weights, but the atom of strontium weighs (I use the approximate whole numbers) 87, while the atom of potassium 39 and that of sodium only 23. If we make the necessary calculation, we will find that in every ten grains of strontium bromide, there will be 6.43 grains of bromine, while ten grains of potassium bromide contain 6.72 grains of bromine, and ten grs. of sodium bromide contain 7.76 grs. of bromine. So also in the compounds with iodine, ten grains of strontium iodide contain 7.43 grs. of iodine; a like amount of potassium iodide would contain 7.63 grs. of iodine, while ten grs. of sodium iodide would contain 8.45 grains of iodine.

Thus it will be seen that weight for weight the potassium compounds will contain slightly more bromine and iodine than will the corresponding strontium salts, while the sodium salts will contain about 15 per cent. more iodine than will the similar salts of strontium.

HOW TO MANAGE PUERPERAL CONVULSIONS.

There is no place where a physician should be as calm and well balanced as in the parturient chamber, and yet how often we meet with cases in that role of practice where even the best and most careful practitioners lose their equilibrium. I desire to refer very briefly to one of the causes that often tries the self-control of the accoucheur and frightens to an alarming degree the attendants at the bedside. It is indeed fortunate that the per cent. of cases of puerperal convulsions is not very high, yet there are but few physicians who can not recall such cases, and often to their deep regret. If I can by these few lines give some practical directions as to the management of this most undesirable class of practice I shall be more than amply paid for the time spent in writing. It is so often the case that the obstetrician does not see his patient until he is called hurriedly to the bedside and finds labor already in progress, or he may be called in haste to see a patient, who is expecting to be confined, "*in a spell*;" however it is, when he finds the parturient woman in convulsions, it is time for him to act, promptly, coolly and to the point. Space and time here will forbid entering into any discussion

of these cases except the treatment. What must we do in puerperal convulsions? Empty the bladder by catheterization. Evacuate the bowel by flushing out the colon. Eliminate the poison from the blood, not by bleeding, thus taking away the *vital fluid* with the *toxic principle*, but sweat the patient profusely by the administration of pilocarpine in quarter grain doses hypodermically every hour until free diaphoresis has occurred, it will then be observed that the patient is arousing from the toxic stupor which has been present between convulsions, the spasms will have ceased, and during the relaxation which accompanies the profuse perspiration the os becomes dilatable; this at once should be encouraged and delivery accomplished as rapidly as possible. Anæsthetics, anodynes and sedatives may have their place, but I have never been disappointed by using pilocarpine to its physiological effects.

THE GENERAL PRACTITIONER'S POSITION.

In this age of specialties in medicine the general practitioner is liable to feel that he occupies a rather obscure and insignificant corner in the professional world. He sees young and inexperienced men occupying a much more prominent position in the public eye, not because of superior ability, but by reason of an inferior quality of conscience, that allows him to recklessly sacrifice important organs, or subject a patient to unnecessary and dangerous operations for the sole purpose of making a display of his manual dexterity. As he sees specialties and specialists multiplying, he feels that if he follows their behest he will be reduced to the position of a guide post, pointing the way to specialists, for which service he is expected to receive a guide post's pay. This, of course, is humiliating but need not be disheartening. The day will come, and is already dawning, when the arrogant assumption of the specialist, untrained in general medicine, will be rebuked. Already there is a revolt against the unreasonable mutilation of the past decade. Too many are becoming specialists because they are not big enough to be general practitioners.

What is needed today in the profession is not the abandonment of general medicine, but a more precise study of it. Owing to the obscurity of results following the administration of drugs, the general practitioner has allowed himself to fall into too slovenly habits of diagnosis and prescribing. He has neglected to make that accurate study of the precise action of drugs that is necessary to successful prescribing. To illustrate, he knows in a general way that the preparations of bismuth are used to allay nausea and vomiting, but he does not stop to study the exact kind of vomiting he has to deal with or that will be thus allayed. He does not know that in reflex vomiting, a dram of tincture of valerian will be of more avail than a pound of bismuth. He knows that opium and the bromides, and gelseminum, for instance, are used to control convulsions, but he does not take the care to discover the exact indications for the use of either drug in a given case, but exhibits them indiscriminately or perhaps in combination.

These are but examples that might be multiplied ad infinitum. With such loose diagnosis and indiscriminate prescribing comes uncertainty and failure, with a consequent loss of faith in medicine. During the last decade the medical mind has been largely occupied with two thoughts—microbe and microbicide. In our effort to discover and destroy the microbe, we have nearly forgotten to preserve the man. There are many things to think about in medicine beside baeteria and antiseptics. Let it be remembered that in general medicine we have a field that is nobler and wider and more fertile and more in need of cultivation than any of the specialties, because it is the foundation of them all, includes them all. True, it requires more drudgery as well as more astuteness of mind to master the subtle problems of general medicine, than to amputate a leg, or remove an ovary, or enucleate an eye, or open a cranium, but by so much the more is the mastery useful, dignified and honorable. We would plead for accurate observation in pathological conditions, for preciseness in prescribing.

The physicians of Indiana have been busy the last three months in obtaining their licenses to practice under the law passed last winter by the legislature of that State. The new law makes it unlawful to practice medicine without a license; and to obtain such licenses it is necessary among other things to present to the State Board of Registration and Examination a certificate from two freeholders as to the moral qualities of the applicant. This clause has debarred some, some failed to apply for license and are practicing illegally. One poor fellow in the Southern part of the State was so elated over his success in securing his license that he forthwith got drunk and boisterous, was arrested, tried before a Justice of the Peace, fined and sent to jail for thirty days. Legal proceedings are now under way to revoke his license.

BOOK REVIEWS.

A Manual of Legal Medicine. By Justin Herold, A. M., M. D. Philadelphia: J. B. Lippincott Company. 1898.

It is a curious fact that in no part of the civilized world is the subject of legal medicine more neglected as a scientific study than in this country. Hence it is that the ignorance of medical witnesses as regards forensic questions is so wofully palpable. The well educated physician, even though he be acquainted with all the other branches of medicine, is utterly incapable of solving important questions of medical jurisprudence. He is completely baffled when confronted by such intricate questions as those embracing infanticide, strangulation, suffocation, drowning, or others. And why is this? because none of the conditions of forensic importance are subject to solution by theoretical principles, but are comprehensible only when studied alone as facts. In this volume every thing that is practical and useful has been inserted, and all idle and superfluous questions which are still *sub judice* are dispensed with.

This work is divided into two parts. The first relates to Toxicology. The body of the work commences with a short dissertation on the legal and medical definitions of poisons. The second chapter of the first part includes remarks relative to poisoning in the living, evidences from the symptoms, &c. Chapters III and IV embrace the rules and duties to be observed in poison cases, and the classification of these substances. There are many other things of interest we might speak of in Part I, but space will not allow.

Part II of the work relates to Forensic Medicine proper. Within its limits will be found every subject of importance relative to this branch of medicine, with the exception of insanity and its allied branches. The largest portion of the work is devoted to the medico-legal consideration of wounds. At the end of the book will be found an Appendex, which gives various important cases, &c.

The book is well printed and nicely bound and merits an extensive patronage.

The Treatment of the Sick. A System of Applied Therapeutics. By William H. Waugh, A. M., M. D. Chicago: The Alkaloidal Clinic Co., Publishers. 1897.

In the treatment of the sick—what can I do for my patient is the information most difficult to obtain. We have plenty of works on diagnosis. The monumental works of Da Costa and Vierordt leave little to be desired upon the subject of diagnosis; while Struempell, Osler, Wood and Fitz, and many others, have so admirably described the symptoms of disease and pathology that any further work in this department seems a useless repetition. But in the domain of therapeutics the condition is not so satisfactory. Each of the systematic works on practice and those on therapeutics, and numerous other books, monagraphs and journals, contain valuable material not embraced in any one or in any reasonable number of these publications. The work seems to fill a long felt want. It is taken up in alphabetical order, which makes every thing easy of access and very valuable as a reference book on treatment. The author sticks to remedies that he has employed with uniform success and use confirmed by experience. The author states that above all else he wishes to teach faith to his readers. Faith will move mountains, and faith will cure disease. Not the silly "faith of Christian Scientist," who sits still and calls upon God to put food in her mouth when she is hungry; but the robust, hearty faith of the man who believes that every good thing is within the reach of him who manfully strives to obtain it. Based upon a thorough comprehension of the truths of pathology, directed by the light of a painstaking diagnosis, such faith is in itself a curative agent of value, and imparts the highest efficiency to the skilfully selected remedies. This is a most useful and valuable book and one that every physician will appreciate.

Pathological Technique. A Practical Manuel for the Pathological Laboratory. By Frank Burr Mallory, A. M., M. D., and James Homer Wright, A. M., M. D., Philadelphia: W. Saunders, 925 Walnut Street. 1897. Price $2.50 net.

The authors states that this work is designed especially for practical use in pathological laboratories, both as a guide to beginners and as a source of reference for the advanced. The practitioner, who have more or less opportunity to do general pathological work, will also find it very useful. Every autopsy presents for solution a problem which may be simple or complex. The known quantities are certain clinical symptoms and physical signs, the unknown quantities are not only the gross and microscopic lesions that may or may not have given rise to the symptoms and signs, but also the etiology of the lesions and the order of their sequence.

The solution of the problem often requires the highest skill in post-mortem, bacterological, and histological technique.

but in its solution lies the fascination of pathological work. In this work is presented a consecutive statement of the methods employed in solving the various problems that arise. Besides the methods of post-mortem examinations and of bacteriological and histological investigations connected with autopsies,. there has been added special methods employed in chemical bacteriology and pathology. The work contains about 400 pages, well illustrated and nicely published in every respect. We heartily commend the work to the medical profession.

An Epitome of the History of Medicine. —By Roswell Park, A. M., M. D., Professor of Surgery in the Medical Department of the University of Buffalo, etc. Illustrated with Portraits and other Engravings. One Volume Royal Octavo, pages xiv--348. Extra Cloth, Beveled Edges, $2.00 net. The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street, Philadelphia: 117 W. Forty-Second Street, New York: 9 Lakeside Building, Chicago.

The history of medicine is really a history of human error and human discovery. This is a subject that has been sadly neglected in our medical schools. The following pages bring the most important facts and events comprised within such history into the compass of a medical curriculum and at the same time rehearses them in such a manner that the book will be useful and acceptable to the interested layman. It gives a complete history of medicine among the Hebrews, the Egyptians, the Orientals, Chinese and early Greeks down to the present time. It is told in novel like form and is interesting from beginning to end. The latter portion of the book contains portraits of such men as Gross, Flint, Roy, Agnew, Sims, etc. The chapter on Lister's studies and methods is most valuable and instructive as are all of them. This book should be in every medical library. It is neatly bound and beautifully printed.

A Text-Book of Special Pathological Anatomy. By Ernest Zeigler, Professor of Pathology in the University of Frieburg. Translated and edited from the Eighth German edition by Donald MacAlister, M. A., M. D., and Henry W. Cattell, M. A., M. D. Sections IX–XV. New York: The MacMillan Company. 1897.

This is a publication of great interest and considerable importance to the student of medical history. It occupies an important field and does it well. We had the pleasure not many months ago of reviewing the first section of this valuable book, extending from Section I. to IX. This volume includes Sections from IX to XVI. including Sections on the Alimentary Tract, the Liver and Pancreas, the Respiratory System, the Urinary Organs, the Genital System, the Eye and the Ear, with a good Index. Under each section is given special discussions of diseases mentioned in the section. In the section on the Alimentary Tract is given the pathological anatomy of diseases subject to this canal, such as ulcerative stomatitis, noma, thrash, tumors, pharyngitis, diphtheria, &c. Under each disease mentioned is given a fine cut showing the pathological anatomy in minutia. All the sections mentioned are treated in the same careful manner. The work contains about 650 pages, is nicely printed and well bound. The two volumes are worthy of much praise, and will be a welcome addition to the library of every practicing physician.

The Medical News Visiting List for 1898: Weekly (dated, for thirty patients); Monthly, undated, for 120 patients per month): Perpetual (undated, for thirty patients weekly per year): and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60-patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, with pocket, pencil and rubber. Seal Grain Leather, $1.25. Thumb-letter Index, 25 cents extra. Philadelphia and New York: Lea Brothers & Co.

A visiting list is an indispensable convenience for the active practitioner. Its carefully adapted blanks enable him at once to note clinical details of every day work, as well as charges and receipts, and to unburden his memory from what can better be carried on paper. It also furnishes him with a legal record necessary for the collection of delinquent bills. Prominent among the many books of this nature stands the Medical News Visiting List. Its blank pages are arranged to classify and record memoranda and engagements of every description occurring in the practice of the physician, surgeon or obstetrician. The work opens with 32 pages of printed data of the most useful sort, including an alphabetical Table of Diseases with Approved Remedies, a table of Doses, sections on Examination of Urine, Artificial Respiration, Incompatibles, Poisons and Antidotes, a Diagnostic Table of Eruptive Fevers, and a full-page plate showing at a glance the incisions for ligation of the various arteries, an invaluable guide in such emergencies. The Medical News Visiting List is issued in four styles adapted to any system of

records and any method of keeping professional accounts. It is durably and handsomely bound in the size of a wallet for the pocket. When desired, a Ready Reference Thumb-letter Index is furnished, which is peculiar to this List and an economizer of time.

CUTANEOUS MEDICINE: A Systematic Treatise on the Diseases of the Skin. By LOUIS A. DUHRING, M. D., Part II.: Philadelphia, J. B. Lippincott Company, 1898.

It was our pleasure some months ago to review Part I. of this valuable treatise. We expressed our hearty approbation of the former edition and we find this section merits our same opinion. This edition is classified into Anæmias, Hyperæmias, Inflammations. The author's classification is good. There has always been more or less dispute as to the best way of classifying skin diseases. Too little attention has always been given to the subject of skin diseases; as a consequence, very little is known by the general practitioner about such lesions. Everything is called tetter or eczema, and a salve consisting of vaseline as a vehicle is given to rub in frequently without the least idea of the pathology or etiology of the trouble. In such works as the one before us we have the proper classification, proper symptoms, with proper treatment given. The illustrations are very fine and add much to the value of the book. It is a handsome volume, well printed and bound. It is a book that will be of inestimable value to every physician.

DISEASES OF THE LUNGS AND PLEURA, INCLUDING CONSUMPTION. By R. DOUGLAS POWELL, M. D., London: Fourth Edition. Philadelphia, P. Blakiston, Son & Co., 1012, Walnut street. Price, $4.00.

We have nothing but a hearty welcome to accord this book. It treats of subjects of the greatest importance, and those with which we most frequently come in contact. It is always satisfactory and pleasant to peruse works treating of but one subject. The first part of this book deals in a thorough and masterly manner of some essential points in the anatomy and functions of the Lungs. The physical examination of the Chest, examination of the sputa, diseases and deformities of the chest walls, diseases of the pleura, etc. All the different diseases pertaining to the Lungs and Pleura are discussed in an elaborate and clear manner. We can find no fault with the work from a mechanical standpoint, and heartily commend it to the most practical as well as to the most thoughtful members of the profession as a most intelligent book.

ABOUT CHILDREN Six Lectures given to the Nurses in the Training School of the Cleveland General Hospital in February, 1896. By SAMUEL W. KELLEY, M. D., Professor of Diseases of Children in the Cleveland College of Physicians and Surgeons (Medical Department, Ohio Wesleyan University); Pediatrist to the Cleveland General Hospital; Consulting Physician to the Cleveland City Hospital; President, 1896 and 1897, Ohio State Pediatric Society; Editor Cleveland Medical Gazette. 180 pages. Price, in buckram, postpaid, $1.25. Cleveland: The Medical Gazette Publishing Company. 1897.

These six lectures contain not only valuable information to nurses, but also to an intelligent laity, and to physicians as well. It occupies a very important field, in fact, the only book of its kind that has ever been published. There is nothing of any practical value peculiar to children that is lacking in Prof. Kelley's lectures. It is charmingly written. We commend these lectures most cordially, and bespeak for them a wide circle of friends.

SPINAL CARIES.—By NOBLE SMITH, F. R. C. S. ED., L. R. C. P. LONDON. SECOND EDITION. LONDON, SMITH, ELDER & CO., 15 WATERLOO PLACE, 1897.

This work contains 157 pages and gives a thorough and satisfactory treatise on diseases of the spine. It is divided into eight chapters, the first giving general description of disease, the second Symptoms and Diagnosis, third, Other Diseases of the spinal column which may inoculate Caries. Chapter V Treatment, VI the period of Treatment, VII Cases. The illustrations are numerous and good. The work is well executed from a mechanical standpoint.

LIPPINCOTT'S POCKET MEDICAL DICTIONARY. Edited by PYLAND W. GREENE, A. B. J. B. Lippincott, Philadelphia and London.

This little volume is handy in size, clear, reliable, and up to modern requirements. The volume's claims are based upon its fulness, accuracy, and convenience. Its vocabulary is made up from the terms used in modern medical literature, and contains about double the number of words in other pocket lexicons. The definition of every word is clear and sufficient.

LEE'S PRIMARY SCHOOL HISTORY OF THE UNITED STATES. By SUSAN PENDLETON LEE. Richmond, Va.: B. F. Johnson Pub. Co. 1897.

This work has been written for children from 8 to 12 years old. It fulfills every purpose intended for it.

LITERARY NOTES.

The December Forum.—The Forum for December is full of good things, and its array of writers is a strong one. The leading article is by Mr. James Bryce, perhaps best known to American readers through his work "The American Commonwealth." The subject of his paper is "The Policy of Annexation for America;" and he approaches the question as "one who can honestly say that his only motive for writing is his interest in the welfare of the great country which he has so often visited." His aim is to show how "the question presents itself to the minds of those English friends of America who love her almost as they love their own island." Mr. Bryce considers that it would be impossible for us to annex Cuba or Hawaii without maintaining a very powerful navy, from which burden we have hitherto escaped. To enter upon a policy of annexation would be for the United States "a descent from what may be called the pedestal of wise and pacific detachment on which she now stands." Mr. J. H. Eckels, Comptroller of the Currency, in his paper on "The Wilcott Commission and its results," argues that the failure of the Commission ought to settle once and for all the idea of feasibility of international bimetallism. Mr. Eckels claims that, as bimetallism has never existed in this country, there is no ground for belief that it ever will. "The question should no longer enter as an element of doubt into the commercial life of the American people; and it should be eliminated from the arena of politics, so that, with each recurring national election, every contact and every value may not be rendered uncertain or disturbed." Senator Morrill contributes a third (and for the present his last) selection of "Notable Letters from my Political Friends," which contains some amusing and historically interesting epistles. Capt. J. C. Ayres, of the Ordnance Department, United States Army, pleads for a development of the National Guard in the direction of the establishment of an artillery service for sea-coast defence. Mr. E. F. Loud, chairman of the Congressional Post-Office Committee, in "A Step toward Economy in the Postal Service," suggests a plan whereby the Department might save $13,000,000 a year. Mr. Charles A. Prouty, of the Interstate Commerce Commission, discusses the question of "Railway Pooling,—from the People's Point of View;" Magistrate A. C. Kudlich, of New York, sets forth in an able paper "The Abuse Police Power;" Judge Agnew denounces the Hawaiian Treaty on the ground of its unconstitutionality; Mr. L. L. Price, of Oriel College, Oxford, treats of "The Present Condition of Economic Science;" and Professor Eucken, of Jena, one of the leading philosophers of Germany, writes of "Liberty in Teaching in the German Universities,"—his paper having special reference to the recent controversy at Brown University. An exceptionally interesting article on "The Dramas of Gerhart Hauptmann," by Mr. Gustav Kobbe, and two literary papers by Mr. Charles G. D. Roberts and Prof. Theodore W. Hunt, of Princeton, on "The Poetry of Nature," and the "Mission of Literature," respectively, make up a very attractive number.

Scribner's Magazine for December, 1897.—Good fiction and abundant and novel illustrations are the features of the Christmas number of Scribner's Magazine. The cover is an odd and effective design in color by Maxfield Parrish—a young Philadelphia artist who has shown wonderful skill in decorative pictures.

A. B. Frost strikes the Christmas note in the frontispiece, which depicts the famous Christmas scene from Pickwick—"The Slide."

Henry van Dyke in "A Christmas Loss" tells a tale of Antioch, fifteen hundred years ago. It is full of religious feeling. The illustrations are by Corwin Knapp Linson, who went to the East for Scribner's last year.

In "The Feet of the Young Men," Rudyard Kipling has put into stirring verse the hunger of young men for the wilderness "when the old spring-fret comes o'er you, and the Red Gods call for you." It was written for W. Hallett-Phillips, of Washington, but a few days before his untimely death. It is dedicated to his memory.

Joel Chandler Harris, through Uncle Primus, tells a story of days long before the war. It has to do with the gambling spirit which held young men in those days, and is called "A Run of Luck." F. C. Vohn illustrates it.

Another Southern story, dealing with the "point of honor" as to when a man is justified in shooting his enemy, is told by Sarah Barnwell Elliott and illustrated by Walter Appleton Clark. Other short fiction is Robert Herrick's tale of Americans in Paris, entitled "A Pension Love Story," with pictures by McCarter; "A Guilty Conscience," by Wm. Maynadier Browne, narrating the farcical adventures of a mince pie, illustrated by Peter Newell; and a story of the trials of a Minor Author, enti-

tled "The Martyrdom of Fame," by Clara E. Laughlin.

A very delicate piece of color printing is shown in "The Posing of Vivette," a poem in dialogue with eight pages of illustrations from pastels by A. B. Wenzell. The color has been interpreted by the great French wood-engraver, Florian, who has made three blocks for each picture. These give a clearness of outline and a definiteness of color that is lacking in other methods of color reproduction.

Another very rich artistic article is Cosmo Monkhouse's biographical and critical account of the artistic achievements of Sir Edward J. Poynter, President of the Royal Academy. It contains twenty-one reproductions of the artist's best work, including a number of unpublished drawings.

James Whitcomb Riley, the most popular American poet, pays a personal tribute in verse to Robert Louis Stevenson. The poem was suggested by a portrait of Stevenson taken in San Francisco in 1879, and hitherto unpublished.

The first part of "The Workers," dealing with the rural regions of the East, is concluded in this issue with a vivid picture of life "In a Logging Camp" in the Pennsylvania mountains. A more varied lot of interesting characters appears in this experience than in any previous one. In its comprehensive grasp of character, it is a foretaste of what Mr. Wyckoff will do in the series to begin in 1898, dealing with "The Workers in the West," especially in the congested labor-market of Chicago. No serial feature in Scribner's has ever excited more intense interest among all classes than this.

"The White Republic," a patriotic poem by Guy Wetmore Carryl, a Christmas sonnet, and the Departments, complete this rich and entertaining number.

Lippincott's Magazine for December, 1897.—The complete novel in the December issue of Lippincott's is "Poor Chola," by Julia P. Dabney. The scene is an unfamiliar one—Tineriffe, in the Canary Islands; the story is full of local color, interest and pathos; the plot is far from commonplace.

"The Consolation of Gamaliel," by Marion Manville Pope, is the quaint tale of a Missouri farmer whose humanity extended even to "bugs." Joseph A. Altsheler, in "The Red Light," deals with a supposed episode of the war of 1812. The "Dr. Felix" of whom Francis Lynde writes rose from obscurity to local fame and fortune by prescribing for cats and dogs, not knowing that his patients were not human.

A timely article on "Gold-mining in North America," from California to the Klondike, comes from George Ethelbert Walsh. Charles Dudley Rhodes, U. S. A., writes with knowledge and affection of "Uncle Sam's Four-Footed Friends," i. e., cavalry horses and pack mules.

W. A. Curtis inquires, "Who are the Greeks?" and shows reason for believing that they are really descended from the Greeks of old. A yet more ancient theme, "Egyptian Queens," is handled by Leigh North.

"A Forgotten Grace," described by Annie Steger Winston, is that which used to be called Sensibility. Emily Tolman writes on "The Club Movement among Women," and Francis J. Ziegler on "Beards and Barbers."

The second of Theodore F. Woolfe's papers on "Some Literary Shrines of Manhattan" deals with those "About and Above City Hall Park."

The poetry of the number is by Martha T. Tyler, Emma C. Dowd, Calvin Dill Wilson, and Madison Cawein.

Some Lessons of the Yellow Fever Epidemic—Dr. Walter Wyman, in the November Forum: Americans do not sufficiently realize what a humiliating reflection upon the enlightenment of the western hemisphere, from a sanitary point of view, a yellow fever epidemic constitutes. In Europe, the disease is now practically unknown; the last serious epidemic having been that of Lisbon in 1857.

Yellow fever now belongs to the western hemisphere, from which also it should be extirpated, as can be done, if the proper kind of international public opinion be brought to bear upon the subject. While the disease is not indigenous to the United States, being always an importation, its visits are, nevertheless, so regular, that since the beginning of the century there have been only nine years in which it has not appeared here. Its natural breeding ground is furnished by the heat, moisture and filth of tropical seaports. These conditions are found in certain cities of the Spanish main, which lacking proper sanitary regulations, have become perpetual foci of infection; and Havana is the worst of them. There the disease prevails during the entire year, a steady supply of fuel for its virulent flames, as it were, being furnished by the newcomers. The natives generally are immune to it, having usually had the malady, in a mild form in childhood.

For us the position is a simple one: Since we have such neighbors, we must either bring about a reform in their sanitary con-

ditions and practices, or continue to run the risk of an annual invasion of this terrible disease. Thirty-five of the visits of yellow fever to this country since 1800 are known definitely to have been from Cuba; and of these, twenty-three have been clearly traced to the port of Havana. Europe's protection against Cuba in this particular lies in her remoteness. A disease which lurks in a vessel starting across the ocean has time to develop and manifest itself so clearly that the quarantine officials on the other side can discover it on the vessel's arrival. But with Cuba hardly six hours from Key West there will always be a percentage of danger, however stringent the quarantine regulations may be, if the conditions remain as they are, unless indeed we assume a policy of absolute non-intercourse with the island during the summer-months.

The December number of the American Monthly Review of Reviews has several interesting features. Mr. Ernest Knaufft, editor of the Art Student, contributes an elaborate study of "John Gilbert and Illustration in the Victorian Era"; Dr. Clifton H. Levy tells "How the Bible Came Down to Us," with a number of reproductions from ancient Biblical manuscripts and printed texts; Lady Henry Somerset pays a tribute to the late Duchess of Teck; an English officer in the Indian service writes about the Ameer of Afghanistan; Mr. E. V. Smalley discusses Canadian reciprocity, and Mr. Alexander D. Anderson summarizes the progress of the American Republics There is also a 23-page, illustrated department devoted to the season's new books, with an introductory chapter, by Albert Shaw, on Some American Novels and Novelists." Altogether, the Review is not lacking in novelty or variety.

Water-Borne Typhoid.

Commenting upon the Ernest Hart report regarding water-borne typhoid the Medical News of Nov. 27, 1897, has this of interest to say:

Ever since the acknowledgement of the bacillus described by Eberth and Gaffky as the direct etiologic factor of typhoid fever, pathologists have believed, and clinicians have gradually come to accept the verdict, that the disease can only be produced by the ingestion of the bacillus with the food or drink. Clinical evidence of this mode of the propagation of enteric fever is not wanting, and almost every observer has been able to deduce convincing testimony by the direct tracing of an infection. Any evidence which tends to establish this view upon a surer basis is entitled to consideration. Dr. Ernest Hart, Chairman of the Parliamentary Bills Committee of the British Medical Association, has prepared the report of the committee, which has just been published (Water-borne Typhoid; a Historic Summary of Local Outbreaks in Great Britain and Ireland, 1858-1893).

The report is valuable not only because it leaves no further doubt in the mind of the reader as to the propagation of typhoid fever by the ingestion of infected water, but because it gains authority from a minute analysis of 205 epidemics, all of which had their origin, directly or indirectly, in the manner mentioned. Dr. Hart purposely omits from consideration eight epidemics of the disease because of their doubtful causation, relying upon those of certain origin to prove his position, although the eight epidemics are cited in detail, and leave little room to doubt the mode of infection.

The author first considers polluted wells as assisting in the spread of the disease, and selects several undoubted instances corroborated by bacteriologic examination. He condemns the employment of drinking-water from wells liable to pollution, and urges that "when the local conditions obtaining are such that they must needs cause excremental pollution of the ground around houses, then it is high time to close all wells sunk in the neighborhood of the pollutions." The New York State Board of Health promulgated a similar proposition many years ago, and its beneficent influence has been shown, in the course of time, among the rural population.

The report next considers the direct pollution of drinking-water by human excreta, as in the careless use of the banks of streams by workmen, and indirectly, as by contamination from leaky sewers. He has been able to trace outbreaks of typhoid fever from these causes not only, but, as well, from cesspools constructed in loose soil with no provisions for making them watertight. He shows that although it may seem safe to throw excreta into privies during a frost, the subsequent thaw may evoke a typhoid epidemic, since the germs of the disease remain actively potent. The author next discusses epidemics caused by drainage from manured fields, by polluted subsoil water, by diluted excreta used as water-supplies, and river-borne infection. Canals as suppliers of drinking-water are absolutely condemned, and the proper filtration of public water-supplies is urged. Two epidemics are cited as having their origin from churchyard drainage, and the

author writes : "Man, however, does not appear content to pollute his drinking-water by the voided filth of living, but is too often careless in the matter of contaminating his water-supply by the drainage from the resting-places of the dead, and thus it comes about that danger arises from the proximity of burial-grounds to the areas of catchment for water-pounding purposes."

The report mentions an epidemic during which 322 persons were attacked, and in which the infection was traced to the washing of milk-cans with polluted water. He discusses some minor points in the causation and course of the disease, and concludes by urging the abolition of cesspools where this is feasible, by insisting upon the maintenance of freedom of pollution of the watersheds and gathering-grounds of public water-supplies by condemning the close proximity of water-mains and sewer-pipes.

Although the results of these laborious investigations are not strikingly original, they prove beyond peradventure that typhoid fever is largely a preventable disease, and that the prophylaxis must lie in the hands of the sanitary authorities. This is especially true of large cities the water-supply of which is apt to become contaminated if the most rigid watchfulness is not at all times exercised. The importance of careful scrutiny of the supply of drinking-water can not be too frequently impressed upon local and State Boards of Health, upon whose energy and wisdom the well-being of thousands of human beings constantly depends. In emphasizing this feature of sanitary work as it relates to typhoid fever, the committee has placed all communities under lasting obligations.

The Barber Shop as a Menace to the Public Health.

Dr. Suiter, of Herkimer, N. Y., presented a paper with this title at the last meeting of the Public Health Association. He said :

This mode of infection has long escaped the notice of sanitarians. In ancient times cleanliness was provided for because we see the symbol of a brass basin and a striped pole as the sign of the barber. The basin was cut to receive the throat of the customer, so as not to spoil his clothes. At present in France, the police regulations require all instruments to be of metal as far as possible. Thus they can be easily sterilized. All these must be submitted to a heat of 100 C. before and after use ; brushes must be placed in boiling water before and after ; the hands must be cleansed from one customer to another, the towels must be sterilized, pulverizers are used in place of powder puffs, the hair is disinfected and promptly removed and a chemic solution is prescribed for various purposes. Patients with syphilis have been seen in the shops, with foul ulcers on their faces. One instance occurred to the speaker who encountered a patient just rising from the chair which he was called to fill, so he left and since has permitted his beard to grow, and when compelled to visit a shop he takes along his own apparatus, at the risk of being called a crank. Instances in numbers might be collected where disease has been transmitted in this way. All know it. Every step is dangerous and precautions should be observed. Sponges are not used by a surgeon a second time, yet a barber employs one again and again, a slight squeeze being all it gets from one case to another. Some things the Parisian regulations do not seem to cover, as the alum stick to staunch the blood in case of a cut, and the block of magnesia to dry the skin. Of course some shops are more careful than others. The New York legislature has had before it for years propositions for a law to correct this evil. The organized barbers themselves ask this for their own protection, and to elevate their business. They desire a board of examiners and licensers appointed, so that no one can practice the art unless properly prepared. They would demand a scientific knowledge as to disinfection and general sanitation. This will be pushed at the next session. If enacted, no more can be desired. Why not all occupations licensed ? All should be qualified to do the work they set up to do. Horse-shoers are now thus qualified in New York. Since the information came from abroad relative to the law in Paris, the medical journals and newspapers comment favorably on it. The people will be quickly educated and the action will be supplemented by favorable sentiment. Let us adopt for our motto, in this respect, the Spanish proverb, "Dicho y hecho," no quicker said than done, and with great promptitude demand an intelligent and unprejudiced inquiry into this fruitful source of disease. If surgeons and dentists are morally and in a negative sense under obligation to disinfec and sterilize their instruments, why not as reasonable to hold the barber responsible ; and why not within the province of health boards to protect the public ? This Association is striving to regulate the disinfection of cars and demand the stoppage of spitting, and an individual communion

cup, and in divers other fields are endeavoring to compel the heedless public to care for themselves; may it not be said that the hygiene of the barber shop far exceeds in importance most of these undertakings?

The Prevalence of Specialism and Who Shall be Specialists.

Dr. George Ben Johnston, of Richmond, Va., in his presidential address of St. Louis on the occasion of the Southern Surgeon and Gynecological Association said :

The tendency of the times was toward specialism in medicine. Specialism is desirable because it gives to the profession and the people the most intelligent consultants and the most skilled attendants the art of medicine can supply. He divided specialists into two kinds: the true and the false. The former he defined as one distinguished for learning and skill in a given pursuit; the latter as one having merely a special occupation. He made the difference between these varieties very clear; for one reached the distinction of a specialist by reason of his training, experience, skill, and wisdom; whereas, the other was made a specialist by the possession of a diploma, a door-plate, and a "kit" of special instruments. The professional qualities of the true specialist he likened to a massive pyramid, the finished capstone of which constitutes the specialty. This pyramid of experience, learning, and skill is a stable edifice, a pillar of strength which cannot topple or reel. In the case of the pseudo-specialist this pyramid of learning is inverted. There is no base of a knowledge of detail, of general information, of professional attainments. The structure has no foundation in fact. It began with the specialty, and its growth spreads as it ascends, overshadowing what is below, thus rendering it an unstable, top-heavy structure. The public has been improperly educated in the idea of specialism. In its eye all specialists stand upon the same footing, all possessing the needful requirements to give the best service. The profession has misled the public and is responsible for this lack of discrimination. Medical colleges should vigorously discourage the practice of recent graduates becoming specialists. Teachers should point out to them the error they are about to commit. Colleges should recognize only the real specialists. Reform in the present system of specialism must be accomplished through the instrumentality of medical colleges and societies, and when they take the matter properly in hand, the general profession and public will lend cordial support and the evil will vanish.

Salicylate of Methyl in Articular Rheumatism.

Siredey has made extensive study of the use of salicylate of methyl, in this disease. He remarks that salicylate of methyl is not to be confounded with essence of wintergreen, as is not infrequently done. This latter product is much less pure and has not the same active property as the former, besides having a most unpleasant odour and being more irritating to the skin. The method of application is simple. The part having been washed is laid upon a sheet of gutta-percha tissue. The salicylate is now applied directly on to the skin over the affected joint, drop by drop, and the gutta-percha tissue is immediately brought over so as to completely envelop the affected part. A flannel bandage is then applied in the ordinary way. A thin layer of cotton wool may be used in some cases if the patient does not find it disagreeable or hot. Should it be the hand or foot the part can of course be completely enveloped as described. It does not seem absolutely necessary to apply salicylate of methyl directly to the part affected, for, as in the case of the hip where the process of wrapping up to prevent evaporation would be difficult, it seems sufficient to apply it to the thigh immediately below, for the action of the drug is due to its absorption rather than to a merely local effect. The salicylate dressing may be renewed twice in the twenty-four hours if the pains are very severe, and the quantity applied may vary from 50 to 120 drops according to circumstances. It does not seem to produce any unpleasant effect on the skin, merely a slight degree of redness being observed, which is painless and without irritation. In the case of acute polyarticular rheumatism the author finds the application of salicylate of methyl, as above described, to be wellnigh impossible. Under these circumstances he administers it internally in large doses. But in subacute and chronic cases where fewer joints are affected and these distally, salicylate of methyl seems to have extremely satisfactory results, being much more marked than those of salicylate of soda. The pains appear in two or three hours after the first application, and cases which do not respond to this latter are at once relieved by the methyl. The existence of heart complications seems to be no contra-indication; thus the author has applied it in two cases of severe pericarditis, both of

which terminated favorably. The same treatment is recommended for gouty arthritis. In the case of infective arthritis the result was not so good, but in large doses a certain degree of benefit was obtained. It would seem that conditions other than rheumatic are controlled by salicylate of methyl. Thus the lightning pains of tabes, tubercular leprosy, Pott's disease, etc., have been much relieved by the application of this drug.

Addition to the Pathology of Infantile Diarrhea.

Baginsky is credited as saying that latterly we have been searching for specific causes for the diarrheas of children, while formerly the anatomical changes were sought after. With a view to the latter he divides the diarrheas of children into three groups :

1. Purely functional disturbances, i. e., acute dyspepsia with chemical changes.

2. Catarrhal diseases, from which we must clinically separate.

3. The follicular diseases.

Transitions do, of course, occur. In regard to the question of how these diseases arise, it may be remarked that very early in modern research it was supposed that we had to deal with a toxic effect. The endeavor to find the producers of the poison made seasonable the classic work of Escherich, who recognized in the bacterium coli and the bacillus lactis the main causes of the disease. To demonstrate the extraordinary resemblance of these bacteria the author showed cultures of both. The similarity is so great that the question has arisen whether they were not one or the same. In about fifty cases which he had examined recently it was shown that the bacillus lactis was able to produce very unpleasant symptoms, and that occasionally it acquires very great virulence. This increase in virulence is also found in the bacterium coli; and he discovered that in private hospitals, where circumstances are different from those in private practice, the pyocyaneus may take on unpleasant qualities and be able to cause diarrhea. This should, however, be distinguished from the typical diarrhea. Similar qualities may also, under certain circumstances, be attributed to the proteus. We know that the bacillus coli and lactis do not generate poisons, but that these are present in the bodies of the bacteria and become free on their death. This peculiarity is also possessed by the proteus and pyocyaneus.

The school of Prague has a different conception of diarrhea; it looks upon it as the expression of a sepsis, therefore as a symptom of a general infection. The author was, however, never able to demonstrate in these cases the well-known bacteria in the blood, and hence the theory of sepsis seems disposed of. It is of decisive importance that the intestinal tract in the cases mentioned shows such grave changes that we are compelled to look here for the primary focus of the disease. As secondary diseases the children would then suffer from affections of the lungs and kidneys.

The Indiscriminate Use of the Antitoxic Serums.

W. H. Parke in Pediatrics says: I wish to speak a word of caution as to the indiscriminate use of various so-called antitoxic serums.

The diffeerent preparations of diphtheria and tetanus antitoxins are, for the most part, reliable and up to the strength claimed for them.

The other serums are, however, unreliable either because, as in the case of antiseptococcus serum, they lose in a few weeks the feeble immunizing substances which they at first, perhaps possessed, or as in the case of anti-syphilitic serum, they probably never had any virtue whatever.

Experimental work upon the development of immunizing serums and bacterial products is necessarily very expensive and cannot be carried on with the hope of any financial profit. We must look, therefore, for the necessary means to carry on this work, so important for the welfare of mankind, to national or city governments, or to private laboratories, such as exist at a few of the greatest universities.

Prognosis in Sarcoma.

Dr. J. T. Whitaker in the Lancet-Clinic says :

Though sarcoma is regarded as the most malignant of all tumors, certain varieties are almost benign. Thus the epulides and many sarcomas of the salivary glands, which look like chondroma, remain local, and though they show a tendency to recurrence they do not produce metastases. Osteo-sarcoma has, as a rule, the same history. The prognosis is best in the spindle-cell sarcoma, then in the round cell, and is most unfavorable in the melanotic sarcoma. Sarcoma of the viscera is also malignant in high degree. Thus sarcoma of the eye, which is, as a rule, a melanotic sarcoma of the choroid, very much rarer of

the iris, distinguishes itself by the number of its metastases and by the rapidity of its recurrence.

Sarcoma is sometimes quiescent for a time, and sometimes for a long time. The same thing may be said of a carcinoma, but the quiescent stage is not so common in carcinoma. Every one has seen a carcinoma of the stomach apparently arrested in its growth and finally overshadowed by secondary deposits which take the life of the patient. A sarcoma is more wont to lie quiet for a time and then to awaken with sudden intensity and rapidly take the life of the patient.

Another distinguishing feature is the fact that carcinoma much more frequently or much more early involves the lymphatic glands. Sarcoma travels chiefly by the blood-vessels, and involves the lymphatics only in the later stages. Sarcoma, also, does not poison the blood to the same degree. The hemoglobin of a woman in carcinoma amounts to 60 per cent. or 65 per cent., while women with angio-sarcoma show 85 per cent. to 86 per cent. (The normal in woman is 90 per cent.) But Limbeck found the red blood corpuscles diminished, in one case 1,280,000 and in another 2,500,000 in the cubic centimeter of blood. Leucocytosis is much more frequent in sarcoma.

Cures for Insomnia.

It is sensible in admitting the complexity of a case of insomnia and of the doubts often connected with its origin. A man may apply all his own knowledge and that of his medical adviser and yet be unable for a time to overcome the tendency of the mind to drift along in helpless consciousness through the long hours of the night. But there must be a cause for this perverseness and a remedy for it, though the cure may not be found without a persevering quest. The ordinary man needs a full share of sleep. He works hard with brain and nerves, and is apt to play as hard as he works. To lie in bed with the wheels of thought running on waste material is a sort of torture as well as a danger to health. Napoleon's faculty of going to sleep on the instant was one of the greatest advantages he had over the commanders on the other side.

The worst enemies of sleep are worrying, over-work, over-eating, indigestible suppers, and the habitual use of stimulants and drugs. The cure includes strict attention to diet, a well ventilated sleeping room, some light exercise, like a walk after the evening meal, and freedom of course, from worry. Napoleon had as many cares and perplexities as the next man, but arbitrarily shut them off. It is not well to go to bed hungry. A cup of hot milk or a light sandwich is advised when that sensation is felt. Yet it is necessary to remember that insomnia and an overloaded stomah are closely acquainted. Stimulants and narcotics in the end are sleep destroyers. The condition they induce is not refreshing sleep. Sleepiness is an indication of the need of sleep, and must not be combated too far. People who sleep but little should not be permitted to disturb those who are differently constituted.

When the whole subject is weighed the main remedy is seen to be good habits and a tranquil mind. Some who resolve to discard worry continue the habit over insomnia. They must be philosophical over that as well as all else. "Don't keep yourself awake in trying to go to sleep" is the injunction. It would be far better to revert to some mild abstraction, such, for instance, as the many fine things that have been said of sleep. Think of Leigh Hunt's definition of it as thetime when the mysterious spirit goes to take its airy round; of Wordsworth's calling it a captive never wishing to be free; of Scott's advice to sleep in peace and wake in joy, which necessarily involves good health and a good conscience; of Bulwer's tribute to "the happiest of earthly boons"; of Milton nodding under the timely dew of sleep, and of Emerson's thought that "Sleep lingers all our lifetime about our eyes, as night hovers all day in the boughs of the fir tree." The right frame of mind and body is the cure for insomnia.

The Best Anti-Lithic Remedy.

The executive production and different elimination of uric acid from the system is now held responsible for the causation of many affections—formerly attributed to other factors. The modern views as to the pathology of the uric acid diathesis have necessarily exerted a material influence upon the therapeutics of the various condi tions grouped under this heading. Greater attention is now given to the dietectic and hygienic management of patients afflicted with this diathesis for it is well recognized that in this way only the over-production uric acid can be successfully prevented. There are many cases however, in which the imperfect elimination of this substance rather than its excessive formation is responsible for the existing disturbance. It is here that the administration of the new

uric solvent Lycetol, will be promptly followed by an augmented excretion of uric acid with rapid relief of the symptoms. Dr. S. M. Ward (Daily Lancet) states that in lithiasis, gout, rheumatism, and in those little understood, vague and painful affections resembling neuralgia, though not following the nerve courses. Lycetol has been of great service in his practice. He cites a characteristic case, in which after prolonged use of lithia waters had given but indifferent results, rapid benefit was derived from the employment of lycetol, which must be considered as the best antilithic as yet presented to the medical profession.

Shall we have a National Medical Examing Board?

Yes, we should have one, composed of members of broad and cultured minds, well up in medical lore, appointed regardless of politics from among the worthy men celebrated for their professional work and attainments. Do the State medical examining boards give entire satisfaction? Are they appointed regardless of politics? With regard to the first question it might be stated that certain doctors practicing near State lines, where their professional duties call them into two or three States it would, at least be exceedingly annoying to have to submit to be examined by as many State medical examining boards. When a physician wishes to change his location from one State to another it would be equally annoying. Our profession is too liberal and broad in its views to submit for long to such narrow and contracted laws to govern the practice of medicine. The only thing that will satisfy the medical profession in this respect is to have a national medical examining board which will do away with all State medical examining boards.

In regard to the second question I will leave those who are most interested in the profession to answer the question candidly in reference to the matter in their own State. If called upon to answer the question with reference to my own State I might make answer: I think the members of the State medical examining boards should be appointed to the high and honorable positions by the appointing power being blind-folded as to politics. Politics should not enter into the work of scientific bodies. If they do, the State medical societies should shoulder the responsibilities, as I believe all State medical examining boards are appointed by the recommendation of those societies.

I believe we could have a national medical examining board that would give better satisfaction in many respects and the members thereof could be better appointed regardless of politics. The members of that board should have broad and cultured minds. They could be recommended as members of said board by a committee appointed by the American Medical Association—an association which I believe is broad enough to purge itself from anything that might be interpreted political. Then we would have three national medical examining boards—the army, the navy, and the United States Medical Examining boards. The National Medical Examining board could meet at convenient places throughout the country and at suitable times so as to give applicants for examination as little expense and delay as possible.

J. M. B.

Hypnotics.

The American Therapist, Auguts, 1897, contains the following:

We recently quoted a brief summary on hypnotics from the 1897 "Year-book of Treatment," calling attention to the usefulness of the agents introduced during recent years, attesting the safety and superiority of chloral and *Chloralamid*, admitting the value of sulfonal and trional—if used with care to prevent dangerous symptoms, and referring to pellotine—the only new introduction of last year.

Nearly five years ago we compiled a list of "New Hypnotics," quoting trade and chemical names, and synonyms, and giving brief therapeutic estimates of each. The article was widely copied at that time. It included all the hypnotics known now, excepting only trional and pellotine. A similar list, emanating from some German publication, is going the rounds of the pharmaceutical and medical press now. It is a demonstration of the fact—only two new hypnotics having been introduced during the past five years—that the fear expressed occasionally in some quarters, that the "avalanche of new remedies is overwhelming us," is unfounded.

An American author, whose specialty is Therapeutics, and who is just now engaged in a study of hypnotics, gave us his estimate of this class of agents in a conversation recently; we quote his view in our own words:

"The only new hypnotic introduced during the last ten years, is pellotine; its value is not yet established, although several favorable clinical reports have been published; nothing valuable therapeutically has been heretofore gained from the cactus plant. Trional, introduced recently, is

only an improved sulfonal (dating back more than ten years), and the two are equally dangerous. *Chloralamid* is the next recent introduction, and *is the safest of all*; but even Chloralamid can induce a habit, although few cases are on record; it is least poisonous, and patients have recovered without damage from enormous overdoses.

All the new hypnotics can be used successfully in some cases, properly amdinistered. Chloral and *Chloràlamid* appeared to yield the best and most reliable results, while least exposing the patient to dangerous symptoms. The ideal hypnotic is still to be attained."

Statistics of Eclampsia in Pregnancy and Labour.

According to the British Medical Journal, Halbertsma has observed 109 cases, 49 being closely analysed. Of these 31 suffered during pregnancy, and 18 at the beginning of labour. In 7 eclampsia set in before the eighth month of pregnancy, all mothers saved, but 6 children lost; in the case where the child was saved incision of the os (Dúhrssen's practice) was undertaken. Of eclampsia later on, Halbertsma classes 5 as "light cases," 1 "moderately severe," 1 sufficiently peculiar to be set aside from the rest (spontaneous delivery, pneumonia, gangrene of the lung), and 17 as definite "heavy cases." Out of the 17, 2 are rejected on account of some uncertainty about treatment, whilst in 7 neither Cæsarean section nor Dúhrssen's incision was practised, and all died, whilst in 8 when one or other of these operations was undertaken 6 were saved. Halbertsma notes that 1 death followedCæsarean section, the first he ever performed, many years ago. It was done before the days of antiseptics and precise suturing of the uterine wound; 6 of the 18 cases of eclampsia beginning with labour are classified as "light," 12 as "severe," no less than three quarters being lost. None of the unfavourable cases underwent Cæsarean section or incision of the cervix, and none received timely assistance from more common artificial resorces. In 1 the pelvis was contracted, 1 patient was an old primipara. There remains 3 cases that was saved, in 2 incision of the cervix was practised, in the third chloroform and morphine were administered, and when the os was completly dilated the forceps was applied. Halbertsma favours this line of treatment, but states that should it fail the continuance of the fits will be more deadly to mother and child than Cæsarean section.

Tubercular Peritonitis.

In an article on this subject, Holmes arrives at the following conclusions, (Annals of Gynecology).

1. Tubercular peritonitis is a relatively common disease.

2. It is never a primary disease, though it is usually impossible to find the initial focus.

3. Recovery follows laparotomy, as a general rule, unless there is an initial focus to keep up the disease.

4. This disease appears in three different forms—the exudative form, the dry form, and the ulcerative form, and they are recognizable in the order named.

5. Microscopical examination of the peritoneum is sufficient for a positive diagnosis. The demonstration of microscopical tubercles, or the recognition of the bacilli are only confirmatory.

6. Puncture of the abdominal wall for diagnosis or for the removol of ascites and injection of air, fluid or iodoform, is dangerous and should not be practiced.

7. Laparotomy, with iodoform gauze tamponade drainage, is the safest and most reliable treatment.

8. Laparotomy should be done as soon as there is a show of emaciation or when a relative diagnosis has been made.

9. A positive diagnosis can never be made before laparotomy.

Cancer of the Uterus and the General Practitioner.

Dr. Fisher at a recent meeting of the Philadelphia Obstetrical Society concluded a very instructive paper as follows:

1. Cancer of the uterus is a local disease at first, and in this stage is amenable to radical surgical treatment.

2. Two erroneous popular notions lead to postponed examinations, and are responsible for the vast majority of deaths from this disease: The one almost universally entertained by the larity is that pain is an essential symptoms of cancer, and the other held by the community at large, including the great mass of family practitioners, is that atypical menopausal hæmorrhage is physiological.

3. The diagnosis at the time the patient first presents herself to the physician is readily made in at least ninety per cent. of cases.

4. In the order of their importance, hæmorrhage, offensive discharge, and pain, are the three candinal symptoms of the disease, and the presence of one or more of

these, in a woman of advanced years especially, should induce the physician to insist upon a local examination as the price of his further profession attendance.

Idiopathic Salivation.

Salvation (Medical Record) may arise from a variety of causes—some local, some remote. In some instances an etiologic factor is not obvious. Among the local causes are inflammatory processes in and about the mouth and its glandular appendages; for instance, stomatitis, glossitis, gingivitis, pharyngits, etc. Mercurial and other forms of metallic intoxication, such as plumbism and poisoning with antimony, may likewise be placed in this category. Among the remote influences related to salivation, some of which are constitutional and others reflex, may be enumerated gastro-intestinl disorders, nausea, vomiting, gastralgia, pregnancy, suppression of menstruation, hysteria, mania, epilepsy, hydrophobia. Excessive discharge of saliva sometimes occurs as a critical manifestation in the course or at the close of attacks of pneumonia, dysentery, septic intoxication, typhoid fever. It may also take place with the disappearance of a pre-existing leucorrhœa or œdematous state. Jaborandi or its alkaloid, pilocarpine, is almost the only drug capable of inducing excessive salivary secretion. Finally there is a small number of cases in which no cause for the morbid condition can be ascertained. In these the disorder is designated essential or idiopathic, but such a distinction can be considered only tentative, to be supplanted by a more accurate and distinctive one when the expansion of our knowledge shall disclose the previously hidden cause.

Jordan has reported two interesting cases of so-called idiopathic salivation occurring in children. In one the patient was a boy, four years old who came under observation on account of constant dribbling of saliva from the mouth. The child's clothing for some distance below his neck was thoroughly soaked. It was stated that he had always dribbled, very much so during dentition. The dribbling continued at night so that the pillow was wet, but to a less extent, and the amount of saliva that escaped varied from time to time. The boy appeared quite happy, and but for the salivation perfectly healthy. He was said to be in good health, to eat well, and have no digestive trouble, but to be always thirsty. He used ordinary diet and was fond of porridge. He was intelligent for his age and talked plainly. Examination disclosed no latent mischief or defect, general or local. The mucous membrane of the mouth was healthy; the left tonsil was perhaps slightly enlarged; and of the teeth which were cut normally, the lower premolars were already decaying. Four other children in the family were in good health and displayed no tendency to salivation.

Three months later another boy aged two and one-half years, presented himself, giving a history almost identical with that detailed. This child too had dribbled very much during dentition, which began when he was four months old, and was completed eight months later. The dribbling continued, but received little attention until the child was two years old. From this time it had grown gradually worse, although it varied in degree. The clothing was saturated. At one time the dribbling had continued through the night. The general health was said to be good except for attacks of tonsilitis. This child also had fed much on porridge. His teeth and the mucous membrane of the mouth were in a healthy state, but the tonsils, especially the left, were much hypertrophied. No other lesion of any sort was discovered on examination. The boy was intelligent, although he did not speak plainly.

The condition described appears to be a rare one. Finlayson has reported a case in which salivation appeared rather suddenly in a child at the age of six years, and Bohn has contributed an article on the subject to Gerhardt's "Handbuch der Kinderkrankheiten," Bd. iv., Abth. 2. The disorder may set in in early life, during dentition, and continue indefinitely thereafter. In some cases it occurs for the most part only in the erect posture, ceasing as a rule during sleep. It may be diminished by emotions of the most varied kind. Iron has proved of undoubted influence in the treatment, but although anæmia was present in some cases this was not thought to be a cause of the disorder. The affection presents some features of a neurosis. The intermittent character of the salivation, its subordination to psychic influences, its tendency to abate with the development of the body or to yield to remedial drugs, point to a peculiar and isolated affection of the salivary-gland nerves in the developing organism of the child. How late in life the disorder may continue is a matter of uncertainty. The question arises: How far may the salivation be the result of an increased flow, and how far due to a failure to acquire the habit of automatically swallowing the saliva? In the presence of hypertrophied tonsils it is possible that as a result of difficulty in swallowing there may be a failure to acquire the habit of performing this act automatically.

Vaginal Ligation of the Uterine Arteries for Fibroids of the Uterus.

Gœlet (American Journal of Obstetrics) takes up this operation, which he has previously advocated, to give the results of a riper experience with it. He still strongly advocates the operation, but restricts it to interstitial growths that have not extended beyond the level of the umbilicus, and to small superperitoneal growths which spring from the wall of the uterus below the fundus, and are without extensive adhesions through which the tumor may obtain nourishment. He has not seen a tumor completely disappear after the operation, but has uniformly seen a decrease in the size of the tumor, and the disappearance of symptoms. He insists upon the necessity of dividing the artery between the ligatures in order to secure its complete obliteration.

The technique of his operation of the vulva and vagina is as careful as for vaginal hysterectomy. The cervix is dilated, the uterine cavity is thoroughly curetted, washed out, and packed with iodoform gauze. A traction ligature is then inserted through both lips of the cervix. With this the uterus is drawn down and over to one side, so as to expose the left vaginal vault. A semicircular incision about an inch and a half long, is made through the vaginal wall at the cervico-vaginal junction to the left of the cervix. With the index fingers the vaginal tissue is carefully separated from the broad ligaments at the anterior angle of the incision, which frees the bladder and pushes the ureter to one side out of reach. Posteriorly, the broad ligament is carefully separated in the same manner without penetrating the peritoneum. By passing one finger in front and the other behind, the base of the broad ligament is grasped between them, and the pulsation of the uterine artery can be felt. It is carefully isolated, seized with a broad ligament clamp, and drawn down. A curved aneurism needle, carrying a stout catgut ligature, is passed up along the finger as a guide and around the artery to the outer side of the clamp and tied. A second ligature is passed around the artery nearer the uterus to the inner side of the clamp, and when this is tied the clamp is removed and the artery is divided between them.

The cervix is now drawn over to the opposite side, and the same manœuvre is repeated on the right side. The wounds are now irrigated with a one per cent. solution of lysol, and the vaginal incisions are closed with a continuous catgut suture. The vagina is packed loosely with iodoform gauze, which is renewed after forty-eight hours. The operation is done with the patient on the back in the lithotomy position. A broad perineal retractor with a short blade is used. Sometimes a narrow-bladed lateral retractor is employed, being inserted through the vaginal incision to hold the ureter to one side.

The needle which he employs for carrying the ligature around the artery is one of special design. It is set at a more obtuse angle to the shaft than those ordinarily made, and the point is semisharp instead of blunt but it is not sharp enough to wound the artery.

The patient is confined to bed for ten days or two weeks. There is usually no elevation of temperature following the operation, and the wounds heal promptly if strict asepsis has been preserved throughout.

The Danger of the Vaginal Injection.

A recent issue of the New York Medical Journal has an instructive editorial on this subject. It fully states the case reported by Dr. Wells at a recent meeting of the Society of Alumni of the Charity Hospital. In this case a woman, who had had a natural labor seventeen days before, and was at the time in a perfectly normal condition, save for a vaginal discharge observed by herself and a state of retroversion of the uterus discovered shortly afterward by Dr. Wells, took it into her head to administer to herself a vaginal douche. Accordingly she filled a Davidson syringe with plain water, thrust the long rectal nozzle of the instrument into her vagina to the whole length, and squeezed the bulb forcibly. She was at once seized with severe abdominal pain and came very near going into a state of collapse. Having escaped the immediate danger, she suffered from a continuance of the pain, which extended up to the region of the diaphragm and was accompanied with tympanitic distention of the abdomen and a condition highly indicative of general peritonitis. Fortunately, the trouble was soon narrowed down to an inflammatory process seated in the pelvis and giving rise to a massive exudate—a state of things bad enough, to be sure, and tolerably certain to trouble her more or less for years to come, perhaps seriously, but not putting her life in immediate jeopardy. For a time Dr. Wells may well have been in doubt, as he says he was, as to whether he ought not to resort to abdominal section.

It seems quite probable, as Dr. Wells intimates, in view of the retroverted state of the uterus in this case, that the nozzle of

the syringe was thrust into the uterine canal, possibly near to the fundus of the organ, and septic or at least irritating material forced through a Fallopian tube into the peritoneal cavity. It is stated in the account that the woman had had gonorrhœa some years before. The entrance of the nozzle into the uterus, perhaps carrying with it some infectious matter from the vagina, and certainly involving a flooding of the uterine cavity with water that in all probablity was not free from septic material, furnishes an obvious and plausible explanation of the manner in which the pelvic inflammation was set up in the case under consideration; but such an occurrence does not by any meane constitute the sole mishap of a vaginal injection improperly administered. In order that the injection may be forced into the uterus and through a Fallopian tube, it is not in the least necessary that the nozzle should enter the uterine canal, that one of its apertures should be so situated as to send a stream into the uterus, or that the organ should be retroverted; the one indispensable condition of safety is the provision of a free passage for the outflow of the fluid injected.

If a vaginal douche is to be employed during the puerperal period, says Dr. Wells, it should be given only by the physician or a thoroughly competent nurse. That is perfectly true; but, apart from the puerperal condition, danger always lurks in a vaginal injection administered without due precaution. How does the uninstructed woman usually proceed when she sets about giving herself a vaginal injection? She squats on some convenient utensil, thrusts in the nozzle, which is almost always of a kind utterly unfit for the purpose, and pumps rapidly (if the syringe is of the bulb type), so as to be over with the unpleasant affair as soon as may be; or hangs the bag high, if she is using an apparatus of the fountain type. In either case if she has the good luck not to drive the nozzle into her uterus—and there is many a woman going about in tolerabe health, so far as she knows, whose uterine orifice will readily admit an ordinary syringe nozzle — in either case, we repeat, she rather suddenly fills her vagina to repletion, even to distention, perhaps with a liquid that, whether by reason of its temperature or of something it holds in solution, may act as a stimulus to spasmodic contraction of the pelvic and perineal muscles. Fortunate is it for her if her vulvo-vaginal sphincter, although never designed to grasp so tiny an object, does not grip the nozzle so vigorously as to imprison the water under a pressure that is very apt to force it into the uterus. It is necessary very often to intrust women with the self-administration of vaginal injections—not of course in the lying-in period—and they should always be instructed how to guard against their dangers; and in particular they should be provided with a nozzle so constructed that no amount of contraction about its shank can close the vaginal outlet. Unfortunately, not one nozzle in a thousand is so constructed.

Experience of Two Hundred and Forty-Eight Cases of Abdominal Surgery by A. Lapthorn Smith, Montreal.*

From January, 1890, to November, 1897, he had opened the abdomen 248 times with 17 deaths, or a mortality of 6¾ per cent. for the whole eight years. In 1892 he had lost 2 out of 12 operations; or nearly 17 per cent., but in 1895 he had only 2 out of 57, or a mortality of only 3 1 and a half per cent. In 1896 his death rate had been low, loosing only 2 out of 60, or a little over 3 per cent. Ninety-three of these operations were performed at his private hospital, 79 at the Samaritan, 66 at the Western, and the remainder at private houses and other hospitals. The death rate at the Samaritan for laparotomies was 5 per cent., and for the same at the Western six and a half per cent. Many of the operations were of the most serious nature, such as two of removal of large tumors of the kidney, without a death; 11 large ovarian tumors with two deaths; 14 abdominal hysterectomies, with 4 deaths; 9 ventral and umbilical hernias, without a death; 62 for double pus tubes, with 5 deaths, and 99 ventro-fixations, with one death, which, however, had nothing to do with the ventro-fixation, as it occurred in a bad pus tube case.

He referred to the charge sometimes brought against gynecologists that they often operated unnecessarily. This certainly could not be said in his case, as he had complete notes of 4,300 cases, besides many others which he had seen in consultation with other doctors, and out of these he had only opened the abdomen 248 times. He felt sure that there were at least as many more who would have been greatly benefitted by such an operation, and who were on the contrary draggling out a miserable existence while under palliative treatment. He had at least a hundred women under local treatment for diseased tubes who were having recurring attacks of pelvic perito-

*Abstract of a paper read before the Medico-Chirurgical Society of Montreal, 12th December, 1897.

nitis at intervals of from three months to two years, and most of these women would, he believed, eventually decide to have the cause of their sufferings removed. He found that this delay greatly increased the difficulties of the operation. If these tube ovarian abscesses were allowed to break into the rectus bladder or vagina they became very dangerous to life. He had been called in consultation and the patient dies from hectic fever, being too far gone for operation. He had also a great many cases of cirrhotic ovaries under his care, and these women, he believed, suffered much more than was generally supposed. Many of them had begged him to remove their ovaries, but it was his custom to decline to do so until they had first been treated for one year by other means.

He thought that he had been too conservative, as many of these sufferers had reproached him for keeping them in misery so long when the operation was followed by immediate relief. In some of the greatest sufferers from chronic ovaritis, the ovaries were so small that they could hardly be felt, and yet the day after their removal the patients claimed that they were entirely free from the pain from which they had sufiered for years. In six years he had only opened the abdomen 36 times for diseased ovaries, and had lost one of them. In about a dozen cases he had left the ovaries in after cutting out cysts and removing tubes. His experience, however, of conservative surgery of diseased ovaries was on the whole unsatisfactory, all the women, with two or three exceptions, reproached him for not having removed both ovaries completely. He thought that he would be more radical in future for the patients and his own sake. It was a mistake to believe that women were never really well after ovaries had been removed; in the majority of cases the operation had completely restored them to health. Among the most interesting cases was one of constriction of the bowels ten days after removal of very adherent tubes and ovaries. The abdomen was re-opened nine hours after fœcal vomiting had begun, and the intestine was found kinked and adherent; it was detached and straightened out and the patient recovered.

He considered the management of tubal pregnancy as one of the most brilliant advances in abdominal surgery. He reported a group of seven cases, all of whom recovered. They had all been sufferers for years from tubal disease, and two of them had been urged to have their tubes removed several years previously. In four of the cases the diagnosis had been correctly made and the other three were mistaken for pus tubes. In two of the cases a live child was floating about in the intestines, and in the third it was lying in the ruptured tube. In these three cases there were from one to three quarts of blood in the abdomen. The symptoms in these seven cases were not exactly the same as those described in the text books. Most of these women had had their periods regularly, but in all the breasts were enlarged. He thought that when we had these three symptoms: enlarged breasts, irregular flow, and a painful rapidly enlarging mass in one side of the pelvis, we might suspect tubal pregnancy. If this is followed by an attack of syncope we might almost be sure of it, and should loose no time in operating, thereby saving every case. He thought that it was a disastrous policy to let them alone.

Some of the nine cases of ventral and umbilical hernia were exceedingly difficult, it being necessary in some cases to leave at least one layer of the abdominal wall on the bowel which were adherent to the sac. They were nearly all closed with buried silk worm gut sutures, which were left in. Although he had had a few cases of hernia following his early operations, during the last three or four years he had not had a case; this was owing he thought to leaving in the sutures for one month, a plan which he was the first to advocate.

Since he had the Trendelenburg posture he did not use drainage, either glass, rubber or gauze, because they were unnecessary. He took great care to have the bowels well prepared, so that they were rarely seen during the operation, and never handled. He was a firm believer in the value of flushing or washing every cell of intestine with salt solution, and he usually left from one quart to two gallons of it in the abdominal cavity to prevent adhesions and to satisfy thirst as well as to wash out the kidneys, as it was rapidly absorbed, strengthening the pulse, and preventing the distressing aching all over the body.

In empting very large tumors he always left about two gallons to support the pelvic veins. He never used iodoform, because of its smell, its cost and danger of poisoning. Several cases of fatal poisoning having been reported here and elsewhere. He used nothing for disinfecting except permanganate, oxalic and bichloride, consequently there was no hospital odour. In eight cases the vermiform appendix was firmly adherent to the right tube. He laid great stress on the method of removing the appendix even with the cæcum, and then closing the hole in the bowel as you would a bullet hole with two rows of Lenbet suture instead of leaving a stump. He knew of several cases

in the practice of other surgeons in which the leaving of a stump had caused a troublesome fistula.

He hoped that this suggestion would be generally adopted by those who were doing this life saving operation more often than he, and he offered it as a small contribution towards the improvement of the technique of the operation.

A Method of Disposing Safely of Typhoid Dejecta

Dr. H. E. Armstrong, in the British Medical Journal, says:

It is generally admitted now that the B. typhosus may be found not only in the alvine but also in the urinary evacuations. It is in the former, however, that it is most dangerous. It leaves the body enveloped in a mass of organic matter convenient for its growth. The material is often transferred at once to a receptacle, containing an even larger amount of similar filth, and the whole "midden" becomes infected. Or, imperfectly disinfected, the motion is hurried into the trap of the watercloset, and thence (perhaps the second or third time the latter is used afterwards) it finds its leisurely way to the town sewer, to reach perhaps later, with its now multiplied descendants, the river supplying some neighbouring town. The disinfection of the bacillus is not a thing to play with. There are, of course, plenty of disinfectants quite capable of ending its career if properly applied. As most of these have the power of coagulating albumen it is of importance that the solution at first added to the motion should not be too concentrated. If it be, an insoluble casing is apt to be formed around many of the germs protecting them from the further action of the germicide. The first solution should be strong enough to prevent growth of the bacillus in the bedpan, yet weak enough to allow the liquid to assist in disintegrating the evacuations so that the stronger disinfectant, afterwards added, may actually get at the material to be disinfected. Both the first weaker solution, and the further strong chemical added to it later on, must each have time to do its work.

Too much zeal is apt to have bad consequences. Time must be given for each stage. The first may certainly be assisted mechanically, the piece of firewood used for this purpose being, of course, immediately burned. But even with this assistance considerable time must still be given to both the first and second stage. We rather press this point, for we have seen a trained nurse pour a little carbolic acid into a bedpan and send its contents at once down the closet, The carbolic acid was, of course, washed away by the flush, the bacilli scotched not killed.

Burying the motion is a practice not unattended with risk. A few inches below the surface organic substances may remain long undecomposed. Probably the typhoid bacillus finds a quiet resting place, and is perhaps harmless till again disturbed, but it may not be killed.

It is said to be safer to put the fæces quite close to the surface, where the more active soil bacteria exist in greatest numbers. But the risk of accidents by this method are so obvious that few of us are likely to employ it. There remains the question of burning the peccant material. Where, as in some manufacturing towns, the pail system of night soil removal is in use, it is the habit of some of these authorities to send a special pail, coloured red or green, to every house where a typhoid case is known to exist. This pail is charged with a powerful disinfectant, is usually fitted with an air-tight lid, and is removed at short intervals and its contents sent to the destructor. Attempts have also been made to burn the motions at home. There are difficulties about this process of a sufficiently obvious character. If it be determined on, the bedpan should first be lined with a layer of paper. On this there should be another layer about a third of an inch thick of peat moss. This can be procured from any hay and straw dealer. It can also be had specially fine and carbolized, or treated with an antiseptic obtained from the pine. In the latter form it is put on the market as "pinol." If the motion is very liquid, or accompanied by a large quantity of urine, the amount of peat may have to be considerably increased. As this substance is highly absorbent, an extra quantity may be added if enough has not been put in at first to account for the whole of the liquid in the motion. The kitchen fire must have been kept in an active state. There must be several inches of bright red coal. Then a few coals are removed from the top, and the contents of the bed pan transferred carefully to the hottest part of the fire, the whole mass being lifted at once by means of the paper, and at once covered by the removed cinders. Some little knack is needed to carry out even this simple process without spilling anything. It is wise to see the nurse make a few blank experiments before trusting her so to deal with the *materies morbi* of typhoid. There is no real difficulty, but a certain amount of cool dexterity is desirable. Of course there are many variants of this method—absorbent

cotton wool may be substituted for peat, even dry earth may be used, where neither is immediately attainable, but as it is not combustible it is not so good. Coal dust may be added or used along with earth. It is combustible enough, but not very absorbent, though, if used in sufficient quantity and finely powdered, it may help over an emergency. Sawdust may also be used. A piece of an old draw sheet under the paper (not instead of it) is serviceable. It enables the contents of the pan to be more easily removed. It must of course be burned. The bedpan itself may be afterwards rubbed out with a little more peat, and then filled with perchloride solution, 1 in 1,000, and this left in a couple of hours.

A Case of Catheter Fever; Death in Twenty Hours; Necropsy.

Urethral fever is ascribed to two entirely different causes. By some surgeons it is considered to be due to a reflex irritation of a kidney affected with acute or chronic interstitial nephritis, while others attribute it to the absorption of micro-organiams from the urethra. It is probable that each of these suggested causes may suffice to give rise to urethral fever, but it has been customary to look upon those cases where death follows in a few hours after some slight urethral procedure, such as the passing of a catheter, as due to reflex action, as it is thought that the fatal result is too rapid for it to be due to sepsis; but Albarran has reported a case of internal urethrotomy in which the bacillus coli communis was found in the blood of the patient, who died twelve hours after the operation. On the whole, it may be said that the majority of the cases are due to septic infection, but that a few may be caused by reflex irritation.

Dr. Whitehead in the Lancet reports the case of a man, aged 47, years who was admitted to the Kent and Canterbury Hospital on September 24th, 1897, for stricture. He first began to have trouble in passing urine ten years ago while in the army of India, where he served for fourteen years, and was several times treated for venereal disease and fever. Two years ago his stricture was dilated up to No. 8, but he neglected to continue the use of the catheter, and the difficulty in passing urine soon recurred. During the previous three months several attempts had been made to pass the catheter without success and without any untoward after symptoms, until subsequently to an attempt on September 1st he had a somewhat severe rigor, and on the next day commenced with a slight attack of facial erysipelas, which passed off satisfactorily. On admission the patient appeared to be in good general health. His urine was of specific gravity 1018, acid, and contained neither pus nor albumen. On the 25th, at 1 p. m., an attempt to introduce a catheter was made, several varieties of small-sized gum elastic and silver instruments being used, but without any of them reaching the bladder. The attempts were continued in all for about ten minutes, and were followed by no hemorrhage from the urethra. At 3, p. m., he commenced to shiver and vomited after taking some brandy. At 3 : 45 p. m., the temperature was 104 F. He again vomited at 4 : 15 p. m., and passed feces and urine involuntarily. He now became very restless and the pulse began to fall. At 5, p. m., the temperature had reached 106.6. He was unconscious and the pulse was imperceptible at the wrist. A hypodermic injection of strychnine and ether was given and an enema containing two ounces of brandy in six ounces of hot water, and he was cold-packed. He soon recovered consciousness as the temperature fell. The pulse also improved. At 6 p. m. the temperature was again rising and had reached 105.4. Tepid sponging and cradling were ordered, with a repetition of the hypodermic injection. The temperature now gradually fell and at 11 : 30 p. m. was 100 deg. The pulse, however, was still only just perceptible at the wrist; otherwise he seemed to have got over the atttack, and it was hoped that no further unpleasant development would arise. During the small hours of the morning, however, the heart again failed and the temperature steadily rose to 103.4 degrees, and in spite of stimulants he died at 7 a. m. The urine after the rigor commenced was all passed involuntarily in the bed, but a specimen obtained from the bladder after death was loaded with albumen and showed 0.5 per cent. of urea.

Necropsy.—At the post mortem examination (permission for which could unfortunately not be obtained until thirty hours after death) a long stricture in the spongy and membranous portions of the urethra was observed, with dilatation and hypertrophy of the urethra and bladder behind. There was no laceration of the mucous membrane of the urethra, or dilatation of the ureters. The kidneys weighed eight ounces and presented no naked-eye changes save slight congestion. Decomposition was too far advanced for microscopic examination to be undertaken. The heart weighed twelve ounces; the muscle was pale and flabby and the endocardium was deeply stained. None of the

other viscera presented anything abnormal with the exception that there were a few petechiæ under the visceral layer of the pleuræ and some congestion of the bases of the lungs.

Does Riding the Bicycle Cause Enlargement of the Prostate Gland?

Dr. Patchen, in the Dietetic and Hygienic Gazette, considers this question one of importance. He says:

If every man who rides the wheel is pursuing a course which has even a tendency to injure one of the most important organs of the body it is the duty of physicians to make known this fact in such a manner that it cannot escape the notice of any one.

The difference between the exempt and the affected classes of riders is just the difference between health and disease. The harmful effects that have been observed and described by those who have written on the subject are found among those who rightfully belong to the invalid class; that is, among those who suffered more or less from prostatic disorders before they began to ride. The writer is convinced that riding the bicycle cannot injuriously affect the healthy prostate gland. This opinion is not hastily formed, but is the result of considerable study and observation.

Chronic enlargement is by far the most common of all prostatic enlargements. It was recognized as a distinct disease ages before the bicycle was invented, and has afflicted and still afflicts men of every nationality and of every station in life. Indeed, so frequently is it found in men of fifty and upward that it has been believed to be the natural result of old age. We know, however, that the tendency of old age is to produce, in every organ of the body, a condition of atrophy instead of hypertrophy; and there is no conceivable reason for believing that the prostate forms any exception to such universal rule. Moreover it has been demonstrated, by Sir Henry Thompson and others, that overgrowth of the prostate does not make its appearance after the age of seventy, in men who have exhibited no symptoms of this disease previous to this time of life. But if old age cannot rightfully be considered a factor in the production of prostatic enlargement, to what cause or causes must it be attributed?

Many contributive causes undoubtedly exist, but the principal cause—the one whose absence renders all others inoperative—is the excessive functional activity imposed upon the gland by lust and unrestrained sexual appetite. Remember that the prostate suffers more or less congestion from every erotic thought and imagination as well as from every accomplished sexual act; that in the interest of the physical health of this organ each period of congestion must be followed by one of repose, to enable the normal condition of the circulation within the organ itself to become fully restored. To allow a recurrence of prostatic congestion before the preceding congestion has entirely disappeared is a violation of physiological law which cannot be repeatedly practiced with impunity. Nature is tolerant as well as exacting. She has provided every vital organ and function with sufficient recuperative power successfully to resist the penalties which arise from occasional transgression. It is only repeated violation which is visited with punishment in an appreciable form.

A better and more scientific interpretation of physiological facts and conditions has broadened our view, and compelled a different belief. We know that the effects of violated law extend at least in three directions. To the drain upon the general vitality and the suffering imposed upon the nerves must be added the baneful consequences of venous congestion. It has been ascertained that while congestion necessarily attends all forms of sexual excitement, that which accompanies prolonged, ungratified desire is more severe and harmful than that which attends actual intercourse. The congestion produced by erotic and ungratified desires is in every way harmful, acting especially upon the prostate, the veins becoming over-distended, and their contractile power diminished, giving rise to a chronic congestion.

The proper position of the body in riding a bicycle does not necessarily differ from that of horseback riding, and in fact varies but little from that of riding in a carriage or sitting in a comfortable chair. Neither of these postures, as far as the writer's knowledge goes, has ever been accused of deranging either the function or growth of the organ under consideration.

The bicycle, as thousands of riders well know, is an invaluable remedy for many chronic conditions of ill health. The secret of its rejuvenating and health giving power lies in the fact that its use is so admirably adapted to promote abdominal respiration. The suction, or lifing power, exerted by the diaphragm in this increased respiratory effort produces a derivative effect upon the circulation in all the abdominal and pelvic organs, the prostate gland not excepted, thereby preventing instead of inducing stagnation and congestion. For this reason the writer has recommended the wheel as a curative agent in different forms of chronic

abdominal and pelvic diseases, which have their origin in derangements of digestion, assimilation, venous stagnation and congestion. In not a single instance, when his instructions have been implicitly followed, have any but the most satisfactory results followed.

The jarring and jolting caused by uneven roads may cause chafing of the skin, and, in exceptional cases, even bruising of the flesh beneath, but the prostate is so closely in contact with surrounding organs and tissues that as a whole, it is capable of but very slight motion.

The old-fashioned lumber wagons, without springs, ridden in so frequently over rough and stony roads by our not very remote ancestors, subjected the body to much more jolting than is caused by the modern bicycle wheel; but no one in ordinary health ever claimed to be injured by it. On the contrary, an overland journey of a few hundred miles in a similar vehicle has often been the means of restoring bedridden invalids to comparatively good health.

It is a well-known fact that the physiological effect of pressure is to cause absorption, a result just the opposite of that which it is claimed the pressure of the saddle produces.

Information Regarding the Saparation for Diagnostic Purposes by a New Method of the Typhoid Bacilli from the Stools and Urine in Cases of Typhoid Fever.

The examination of specimens of blood from cases of suspected typhoid fever for the Widal reaction has been of great assistance in diagnosis. Occasionally, however, the agglutinating substances do not develop in the blood at any time, or only very late in the course of the disease, or an earlier infection cannot be excluded, owing to the lack of a reliable previous history. In these instances the Widal test fails to give the information desired.

"Bacteriologists have long sought for a rapid and certain method of obtaining and identifying in pure culture the typhoid bacillus from the stools and urine in cases of typhoid fever; but hitherto without satisfactory results. Dr. Hiss, assistant bacteriologist to the health department, of New York, has devised a method by which it is believed it will now be possible to recover and identify the typhoid bacilli within less than forty-eight hours, from specimens of fæces and urine containing them. The health department desires thoroughly to test this method, and is prepared to undertake these examinations if proper specimens are furnished.

"While definite knowledge is lacking as to the number of typhoid bacilli usually present in the stools of typhoid patients, and as to the time of their appearance and disappearance, it is believed that they are generally present in the discharges, not only during the height of the disease, but also, though to a less extent, at its commencement and for a considerable time during convalescence. The appearance of the bacilli in the urine is usually later than in the fæces. The experience thus far obtained seems to indicate that the bacilli may be obtained from about fifty per cent. of all cases on the first examination, and from about ninety per cent. after repeated examinations. The health board hopes that these examinations will prove of value, not only for diagnostic purposes, but also in solving important sanitary questions relating to the presence in and time of disappearance of the bacilli from the stools during convalescence.

A Few Considerations Regarding the Treatment of Disease in Children.

1. Administration of physics of less importance than dietary regulations.

2. Occupy large and well-ventilated room.

3. All noise and bustle to be prohibited.

4. Should be fed through nasal tube or per rectum when necessary.

5. To reduce temperature.

(*a*) Tepid sponge bath.

(*b*) Warm bath, 80 deg. to 85 deg., in convulsions and great irritability of the nervous system and in Bright's disease, remain ten to twenty minutes.

(*c*) Hot bath 95 deg. to 100 deg., in great prostration, cholera infantum, urgent vomiting, remain four to five minutes, a little mustard may be added.

(*d*) Cold douche followed by vigorous shampooing in weakness, atony, scrofulous cachexia, etc.

6. Stimulants take a high place among internal medications.

7. Tonics, quinine, iron, mineral and vegetable bitters, cod-liver oil, etc.

8. Opium should be given cautiously.

9. Belladonna can be given in large doses. Children one year of age can take one to twenty drops.

10. Quinine, digitalis and lobelia are well borne.

11. Alkalies form a valuable class of remedies, also astringents.

12. Purgatives may be given, but do not overpurge.

Pathological Anatomy of Diphtheritic Paralysis.

According to Pediatrics Preysz has examined the nervous systems of three children who had died with diphtheria. In two cases he had found an involvement of the spinal cords and several of the peripheral nerves. In the third case the spinal cord, the vagus, and the phrenic were diseased. In the spinal cord there was atrophy, with localized distinction of nerve cells and hemorrhage. There was degeneration of the columns of Goll on both sides. There were localized areas of degeneration and exudation of both anterior and posterior nerve roots. In most of the peripheral nerves, particularly in the vagus, the recurrent laryngeal, and phrenic there was decided degeneration, with a marked degree of dilation of the perineal spaces. The changes found were all of a degenerative, not of an inflammatory, nature.

The changes in the spinal nerve roots, and the columns of Goll are alike important, anatomically and clinically. The degeneration of the posterior nerve roots, which process begins in the intervertebral ganglion, shows that the diphtheritic paralysis may involve both the peripheral and central nervous systems. This also (referring to the above) explains the absence of knee reflex and the symptom ataxia. The unexpected deaths which occur in diphtheria convalescence are probably due to a high degree of vagus degeneration.

A Plea for Tonics.

Dr. Jonathan Hutchison says: The knowledge of the right use of tonics is of primary importance to success in practice. It acquires additional value in these modern times, in which a considerable part of the community have scruples of conscience as to the use of wine and beer. The number of persons is probably very large who go through life with only half the enjoyment of living which they might obtain could they but keep in better tone. They are always deficient in energy, working with sense of fatigue, doing their daily duties, but with painful effort and with daily perception of want of rest. For not a few of these a suitable drug-tonic is the thing needed, and would, if patiently persevered in, give a new charm to existence. It is a great mistake to believe that articles of food, cold bathing, or even country air can be made to take the place of drugs. No doubt these are of the utmost importance, and, as a rule, are better than drugs, but they are by no means always efficient substitutes. They are allies, not competitors, and the best of them by very far—change of air—is one which in nine cases out of ten it is out of the power of the patient to purchase. Under such conditions a concentrated tonic is invaluable. A fortnight's use of champagne at dinner is to many persons as good as a fortnight at the seaside and much less expensive. Do not let it be said that champagne is only a "stimulant." We do not know enough of the chemistry of the nutritive processes to be sure that it, and with it a whole host of allies, such as quinine, nux vomica, arsenic, phosphorus and the like, may not supply in minute quantities exactly what the nerve cells are needing for their complete nutrition. Or even if they do not supply the elements, they may, by facilitating the distribution of blood, be the means of indirectly supplying it. We must not theorise too much, but rest our faith on observed facts.

In 1881 I prescribed for a lady who suffered much from neuralgia a tonic containing one grain of quinine, ten minims of tincture of nux vomica, and a drachm of tincture of orage peel. She was then thirty-seven years of age, and had lost the sight of one eye, with white atrophy of the optic nerve, after severe neuralgia. I have seen this patient again recently; she is now aged 54 and in excellent health. She tells me that when I prescribed the tonic I told her to take it regularly, and go on for a long time. She has taken it ever since. Her allegation is that she cannot leave it off for a week without being threatened with a return of her neuralgia, and that she never feels quite well without it. She has practically got quite rid of the neuralgia which used to torment her. She leads a very active life, and boasts that she has never needed any medical advice since she began the medicine. Her only reason for now again consulting me is to have her spectacles examined. Her blind eye remains blind, but she can read all day with the other. It should be added that Miss E——is of dark complexion and of bilious tendencies, and that the reason that her tonic has suited so well is, probably, that a few drops of cascara are in each dose. The combination of aperients with tonics is one of the most important points in making them suit. "To me purgatives are tonics" was once the remark of an intelligent patient whose observation I have never since forgotten. If tonics cause the least degree of constipation they almost always put the liver out of order, produce headache and loss of appetite. The addition of an aperient prevents these inconveniences. It is

the same with many wines; if they act as laxatives they agree, if the opposite they do not. Nux vomica has for many patients an advantage over quinine in that it is less liable to constipate. The habitual addition of cascara is, however, for most patients a sufficient safeguard even in the case of quinine. From one to three drops to a dose is usually quite sufficient. Under the present system, which in most instances keeps the dispensing of the remedy in the hands of its prescriber, the family practitioner cannot act so freely as the consultant. If he says, "You must take this medicine for many months, a few weeks will do no good," he may be suspected of having regard to his own interests, whereas the reverse is usually the case when such directions are given by a consultant. A little ingenuity may, however, easily devise expedients by which this difficulty may be surmounted, and I conclude, as I began, by expressing my conviction that a far more liberal and prolonged use of tonics would be a great boon to very many of our patients. The public needs to be educated in the matter, and the prejudice against "taking medicines for long," and the absurd belief that by so doing "they lose their effect," should be counteracted by careful explanation.

Disposal of the Stump in Appendicitis Operations.

Dr. Haggard, of Nashville, (Medical Record,) considers appendicitis pre-eminently a surgical affection. Surgical isolation of the infected appendix is as essential as the hygienic isolation of any of the infectious diseases. The more imperative and explicit operative indications were specified. The various methods of disposing of the stump by invagination were discussed, and the modification and technique employed by Van Hook, Dawbarn, McBurney, Murphy, and Morris were described. The ideal of all surgery was completeness; applied to the surgery of the appendix, it was total extirpation of the organ. He then described the following method practised by Deaver in suitable cases: After the appendix and meso-appendix are freed from adhesions, the cæcum is stripped of its contents and grasped between the fingers and thumb of the left hand, the appendix being held by forceps and cut off flush with the colon. The resulting peritoneal wound is united by contiuuous Lembert sutures, while the cæcum is still held securely with the left hand just as in a gun-shot or stab wound of the intestine. Sutures may be disposed in two layers, the first uniting the edges of the wound and the second approximating the peritoneal covering to the cæcum over it. This method is not applicable in cases in which the cæcum is bound down by adhesions preventing its delivery in the incision. It is necessary to prevent the escape of colon contents by accurate suturing of the cut ends.

Total excision of the appendix with closure of the hole in the head of the colon does away, first, with subsequent perforation of the stump under the ligature from infection in its own cavity; second, abscess of the wall of the cæcum from invagination of the infected stump; third, continuance of infected process from stricture in the stump between the distal ligature and the proximal opening of the appendix into the cæcum; fourth, imperfect invagination with incomplete drainage of the stump on account of the cæcal wall being thickened and stiffened with inflammatory exudate.

The author has employed this method with entire satisfaction in five cases.

Don't Wet a Lead Pencil.

A writer in the Indian Lancet suggests that the practice of wetting a lead pencil on the tongue before using it is an unclean habit, to say the least, and perhaps also a dangerous one.

Recently a woman of fine bearing and elegantly dressed stepped into the counting room of one of the local papers of a large city to insert an advertisement. Having no pencil of her own, she picked up a pencil which was tied with a string to a pad used for writing. At once she moistened the lead with her tongue and began to write.

An elderly woman who was standing by reminded her that the pencil had just been used by an old man, ragged and dirty, greasy and filthy, who also had contracted the same habit of wetting the pencil on his tongue every time he wrote a word. The disgusted woman flung the pencil away and scolded the young man behind the counter until he sharpened a brand new pencil for her use and benefit.

The habit is a foolish one. Instead of making the pencil write more freely and easily, it hardens it and makes it write blurred and irregular.

Newspaper men and those who use lead pencils a great deal never dampen the lead in the mouth or with a sponge. Besides being injurious to the lead it is a dangerous habit, inasmuch as disease has been known to be conveyed in that way into the system.

The Slaughter House in Relation to Disease.

The Medical Record editorially deals with the subject as follows :

The growing danger of slaughter houses as a factor in spreading disease is at last being appreciated in its true bearings, and steps are being everywhere taken thoroughly to investigate the matter and to correct as far as possible the evils of the present system. There is much to be done, but as soon as the general public understands the nature of the perils to which it is subjected, owing to the unsanitary conditions under which slaughter houses are generally maintained, just so soon will they insist that remedial measures be taken. The most effective way to impress people with a sense of their danger is by pointing out to them that these unsanitary conditions are one of its sources, and to prove to them that unless radical remedies be put into force infectious diseases may increase to an almost unlimited extent.

Ch. Wardell Stiles, Ph. D., in a paper published in 1896, presents in a clear manner the subject of country slaughter houses as a factor in spreading disease. In the course of his remarks he says : "The first matter to notice in connection with this subject is that every slaughter house is, from the very nature of things, a centre of disease, and naturally the poorer the condition of the premises the more dangerous they are. These facts will appear clear if one considers what takes place at one of these houses. Even if only a few animals are slaughtered each week, the total number may amount to several hundreds during the year. Some of the animals are surely diseased. At least one of the hogs has trichinosis, and when the offal of this trichinous hog is fed to hogs which are raised upon the grounds the latter cannot escape infection with trichinæ. But that is not all. The slaughter houses are often overrun with rats; the rats feed on the offal, and when feeding on the offal of a trichinous hog they likewise cannot escape infection with trichinæ. Rats act as direct transmitters of trichinosis to hogs." Dr. Stiles gives many more instructive details, but which we have not the space to quote. He summarizes thus : "Every slaughter-house is a centre of disease for the surrounding country, spreading trichinosis, echinococcus disease, gid, wireworm, and other troubles caused by animal parasites, and tuberculosis, hog cholera, swine plague, and other bacterial diseases. The important factors concerned in spreading these diseases are offal feeding, drainage, rats, and dogs." Two of the remedies suggested are as follows : "First, by a reduction in the number of premises on which slaughtering is allowed, on which account it is urged as all-important that there be a segregation of slaughter houses, so that all the butchers of any given town will be compelled to do all their killing in a common, inclosed, and restricted area. In abandoning slaughter houses care should be taken to destroy the rats, in order to prevent the spread of infection. Second, by regulating the factors concerned in spreading the diseases : (*a*) offal feeding should be abolished; (*b*) drainage should be improved; (*c*) rats should be destroyed; and (*a*) dogs should be excluded from the slaughter houses."

This question of slaughter houses is attracting much attention in Europe, though chiefly in connection with tuberculosis, and some of the countries there have adopted stringent regulations controlling their management. The system in vogue in Denmark is said to be the most perfect. In Copenhagen every animal is after slaughter branded upon various parts of the carcass, and the brand is exposed in the butchers' shops to the public, which in consequence recognizes that the meat has been passed by the official inspectors as fit for human food. In England the question has only lately been seriously taken up. A royal commission has been appointed, members of which are at the present time visiting some of the principal towns in the kingdom for the purpose of collecting evidence. In France carcasses are seized when there are any visible signs of tuberculosis.

From abattoir statistics it is shown that in Berlin 12 per cent. of the cattle slaughtered are tuberculous; in Dresden, 14.4 per cent; in Upper Silesia, 9.5 per cent.; in Durham, 18.7 per cent.; and in Mid-Lothian (a district in Scotland in which Edinburgh is located), 20 per cent. Of those slaughtered in London, 25 per cent. are diseased; and in New York, about 20 per cent. There can be no room for doubt that the sooner the task of putting all slaughter houses into a proper sanitary state is effectively carried out, the better will it be for the public health.

The Aerial Transmission of Typhoid Fever

The New York Medical Journal states that Germano has made investigations in the following manner : A certain quantity of typhoid cultures in bouillon or agar were

mixed either with the dust taken from the sick-room, with fine sand, with earth, or with the fecal matter of diarrhea, all of these substances having been previously sterilized. Each mixture was then distributed in three Petri boxes, one of which was placed in a damp room; another was left air-tight on a table in the laboratory, but, in order to obtain more rapid desiccation, the mass uniformly distributed on the walls of the box with a sterilized glass rod. At various intervals as much as would lodge on a platinum loop was taken from each receptacle and sown on a proper medium.

These experiments proved that, in the earth and the dust, under the influence of slow desiccation, as in the second box, or accelerated desiccation as in the third box, the typhoid bacillus ordinarily succumbed at the end of twenty-four hours, and that, occasionally only, it still gave cultures in bouillon after having been in the air-tight box for two or three days. In the fecal matter, under the same conditions of desiccation, the life of the typhoid bacillus was much longer; on agar no cultures were obtained at the end of six days, but in bouillon the cultures could still be made at the end of twenty-five days. This difference is attributed by the author to the fact that it is very difficult to dry the typhoid bacillus in fecal matter. He says that, in any case, if typhoid fever is to be transmitted by the air, the desiccation of the bacilli in the fecal matter would have to be such that they would no longer be alive.

In another series of experiments the cultures were deposited on pieces of cloth and linen. In these conditions, in spite of the progressive desiccation in the boxes, the typhoid bacilli still preserved their vitality at the end of sixty days, and sometimes even longer. The author explained this fact by saying that the fibers of the tissues protected the bacilli against desiccation.

From all the experiments the author concludes that the doctrine of the transmission of typhoid fever by the air is scarcely admissible. In order that the air may carry particles to which the bacilli adhere, it is necessary that they should be found in a condition of desiccation which is scarcely compatible with the vitality of the bacillus. On the other hand, the danger of transmission by objects, such as clothing, wood, etc., soiled by the dejecta, is very real.

The Treatment of Syphilis.

Whitla (British Med. Journal) discussed this subject in a paper read at the recent meeting of the British Medical Association. He said that two drugs alone need be considered—mercury and the iodides. He regarded it as proved that mercury had specific or curative effect on syphilis, and thought it best to limit his remarks to the following points: (1) How mercury and the iodides were supposed to act; (2) when should mercurial treatment be started, especially should it be given in the primary stage? (3) the various methods for its routine administration, its dosage, and the length of time necessary for mercurial treatment; (4) the treatment of tertiary symytoms and congenital syphilis. The pharmacology and mercury—the mode of absorption, especially when administered by inunction, elemination, etc.—was considered. Mercury he regarded as a vital antidote to the syphilitic poison, and so long as the virus of syphilis remained in the organism mercury, he believed, would expend its force upon it without injury to the patient. This, he thought, gave a working hypothesis as regards dosage. The question of the bactericidal power of iodides in connection with Binz's view was dealt with, and their inutility in the first and early stages emphasized. The continuous and interrupted methods of administering mercury were treated at length, although it was stated that these could not be rigidly separated. The continuous method was favored by the speaker. He prescribed small doses as early as possible. Routine treatment was deprecated. As a guide determining the effect of the mercury, the weight chart was strongly recommended. Of the various modes of administration the inunction was most generally useful, although this possessed many disadvantages. Under ordinary circumstances small doses of mercurious iodides, Plummer's pill, etc., were sufficient. In the tertiary stage, Dr. Whitla advised pushing the iodides until the symptoms abated. He believed that the whole secret of success in the treatment of syphilis was to get as much mercury into the system as possible without producing ill effects. He had not seen one case of harm resulting from the use of mercury in syphilis in his own practice.

Gonorrhea in Married Women.

Van Schaick, in the New York Medical Journal, says that the conclusions of Noeggerath as to the importance of gonorrheal infection have been fully confirmed. Three years ago he began the investigation of cases of married women suffering from vaginal discharge. In each instance cover-glass slips were made and stained with methylene blue. Whenever gonococci were not found subsequent examinations were made, at least

three times, whenever it was possible, and in several patients it was only at the second or third examination that the gonococci were discovered.

The writer examined in this manner, during a space of very nearly three years, sixty-five women. Of these, four were examined again at an interval of at least a year, and two were examined again after an interval of two years and over. He thinks the result of his examinations does not represent an absolutely true statement of the condition of things. Cases of gonorrheal infection must certainly have escaped notice. Most women take copious douches before coming to the office, and thus wash out the parts more or less completely, and in many cases gonococci are imbedded in the tissues, and for this and other reasons escape detection. Yet such evidence as he can present is positive.

All of the women seen complained of leucorrhea, and in three only was there any evidence of an acute gonorrheal infection from the appearance of the vulva, such as to lead to an instant diagnosis of gonorrhea. In others the character of the discharge and the appearance of the parts simply led to suspicion, which was generally confirmed with the microscope. In four instances the patients declared that they were aware that their husbands had "something the matter" with them.

Among the sixty-five women examined he found gonococci seventeen times, or 26 per cent. of the cases. Nineteen women were examined twice, and in three gonococci were found at the second examination. Thirty-two were examined three times, and in three of these the third examination revealed the cocci.

These results tend to show that gonorrhea is a more common disease among married women than is generally believed. They provo the utter futility of mere inspection in making the diagnosis of the disease, and the uselessness, so far as gonorrhea is concerned, of the inspections made in countries where the social evil is partially regulated by medical control. This, however, is now everywhere fully recognized, and the necessity for microscopical examinations has been urged repeatedly.

A New Test for Typhoid Fever.

The Health Board of New York claims that a medium has been found in which the typhoid bacillus will thrive, but in which the colon bacillus will not. Typhoid germs are to be found only in the intestines, if at all. Unfortunately the colon bacillus haunts the same region and resembles the typhoid bacillus very closely in appearance, but is absolutely harmless. If, therefore, in matter thrown off from a patient's digestive tract either species is found it is very difficult to tell of which sort it is. Dr. Hiss thinks that he has discovered a tes., and the Health Board is going to adopt it officially. The test consists of a culture medium in which typhoid germs will multiply and the colon bacillus will not. The culture is composed of gelatin, agar, glucose (to make the mixture ferment), salt, and Liebig's food. Typhoid germs grow in it and the colon bacillus does not. In actual practice a minute quantity of the simi-fluid matter sent for examination is taken out on a loop and is placed in a small vial containing the culture. Eighteen hours is sufficient time for the bacilli to grow, and a statement of results will reach the medical man in thirty-six hours after he has sent a specimen to the laboratory. At the end of eighteen hours a small portion of the culture is spread on a glass plate which has a glass cover. In a short time the appearance of this plate will give the information sought in showing if there has been any growth. If there is growth it is a case of typhoid fever; if not probably no typhoid fever exists.

Clinical Peculiarities of Typhoid Fever in Children Under Five Years.

Rocaz states that the onset is frequently sudden, more so than in adults, the temperature rising to 104 deg. F., or more in a few hours. Rillet and Barthez, however, look upon this sudden onset as indicative of gravity in the disease.

The intestinal symptoms are less marked than in adults, the younger the children the fewer and smaller the ulcerations. Constipation, obstinate in character, is the rule in the early periods of the disease, but diarrhœa is a frequent complication, frequently persisting after defervescence; is obstinate and requires energetic treatment and strict diet. Emesis and anorexia are often prominent symptoms, sometimes assuming grave features.

The tongue, as a rule, remains moist, and varies as to foulness, or otherwise. The temperature is like that of the adult, though hyperpyrexia is commoner, and comparatively well borne by the patients.

The pulse is seldom dicrotic, but often rather slow and irregular, like that of meningitis. In the febrile stage these irregularities are indicative of cardiac exhaustion, call for careful attention, and often presage death; in convalescence they are not so grave. In the majority of cases the heart

is regular in action. Broncho-pneumonia is a grave complication.

With regard to rash, lenticular rose spots are the only pathognomotic symptoms in children and are usually regular as regards appearance, time of eruption, and prognostic value. Sudamina are common after the appearance of the rose spots. Desquamation is frequent after this disease in the very young. Abnormal eruptions are also of frequent occurrence in children, and more so than in adults.

The duration of the fever is shorter in children, though relapses occur more frequently, and are usually less serious than the first attack.

Convalescence is rapid, surprisingly so, and prognosis is mainly dependent on age, graver under three years, less so at four, and generally favorable at five and more.

The Chemistry of the Intestinal Contents and the Influence of the Bacteria Present.

Dr. A. L. Gillespie has made elaborate experiments on dogs, and has undertaken to ascertain the grosser chemical changes occurring in the intestinal tract, and the nature and influence of the micro-organisms present in the contents after the ingestion of various kinds of food and the administration of certain drugs.

The following are the chief conclusions arrived at:

1. The reaction of the contents of the canal is *acid throughout*; in the stomach this is mainly due to hydrochloric acid and hydrochloric acid combined with proteids, in the duodenum chiefly to hydrochloric acid combined with proteids, and to a less extent to organic acids, and in the lower sections of the gut to organic acids and acid salts.

2. The acidity is higher in the duodenum owing to the concentration of the contents by the absorption of water, and the proportion of inorganic chlorides is here much increased owing to the combination of the acid of the stomach with the alkali of the pancreatic juice.

3. Two main classes of organisms—mutually antagonistic—are present: (*a*) acid-producing and unable to liquefy gelatin; (*b*) alkali-producing putrefactive bacteria, capable of liquefying gelatin. The ammonia formed by the putrefactive organisms often unites with the acid, due to the other class, to form ammonium lactate, a salt favorable to the growth of either.

4. Normal or increased acidity of the stomach contents favors the destruction of the less resistant putrefactive bacteria. A low gastric acidity has the reverse effect, and might thus cause indigestion. On the other hand, the low acidity, by encouraging the growth of the acid-forming bacteria, may ultimately increase the acidity of, and lessen the putrefactive decomposition in the lower part of the canal.

5. The two classes of organism were differently acted on by different antiseptic substances.

6. Trypsin is capable of energetic proteolytic action in the presence of organic acids, but being slowly destroyed by these acids has constantly to be replaced.

Destructions of the Endometrium by Hot Injections.

Schick believes the ideal method should fulfill the following requirements (Boston Medical and Surgical Journal):

(1) Absolute asepsis; (2) removal of the entire tissues down to the muscular layer; (3) thorough removal, so that no portion of the mucosa may remain; (4) limitation of the destruction action, so that extensive injuries to the deeper parts may be avoided.

None of the procedures usually adopted satisfies these requirements. In curettement the diseased mucosa is rarely completely removed, and then only in puerperal cases. Chemical agents, especially chloride of zinc, may cause destruction of the subjacent muscular tissue in some spots, while in others islands of mucous membrane remain untouched. Electrolysis produces the same results as caustics, though less effectively.

The writer, after various experiments, came to the conclusion that the effect of hot water was most satisfactory. Before employing it in the living subject he studied its action upon the endometrium in freshly extirpated uteri. Water at a temperature of 80 to 85 degrees C. was allowed to flow through an intrauterine catheter for periods ranging from thirty seconds to two minutes. After half a minute the entire mucosa was seen to be covered with a thin, whitish layer, which penetrated more deeply according to the length of exposure to the action of the hot water. As practiced on the living subject the writer's technique was as follows: The cervical canal is dilated with laminaria tents until it admits the little finger. The patient is anesthetized, the genitals rendered thoroughly aseptic, and the cervix is seized and drawn down with a volsella. To a kettle of water, heated by a Bunsen burner, is attached a rubber tube on which is fitted a Bozeman-Fritsch double-

current catheter. A second tube communicates with a receptacle filled with ice-water, which is allowed to flow into the vagina before and during the operation. The hot water is now allowed to enter the uterus while the end of the catheter is constantly turned in different directions in order that the entire endometrium may be affected. As the hot water escapes from the os it mingles with the cold, and thus does not burn the vagina. Since the action of the heat is more intense upon living than upon dead tissues, the writer adds the caution that thirty seconds should be the limit of exposure. The degree of reaction is noted by the marked contraction of the uterus.

Several successful cases of menorrhagia are reported (including two cases of abortion and one of fibromyoma), in none of which were any unpleasant effects observed.

The writer calls attention to the different actions of steam and hot water. The former has been introduced into the uterus for the purpose of controlling hemorrhage, while the effect of the latter is to destroy the entire lining membrane of the organ. While the writer has seen no failure of the mucosa to become regenerated when it is exposed to the action of the heat for half a minute, he thinks it wiser, until the subject has been more fully studied, to employ it only in the case of women with fibroids and those who are near the climateric, in whom the preservation of the function of menstruation would be less important.

Diphtheria in the Lower Animals.

Dr. J. B. White, in discussing this subject at a recent meeting of the New York Medico-Chirurgical Society, had this to say:

The lesions found in human beings suffering from diphtheria were not the same as in the lower animals. If diphtheria bacilli were placed on the mucous membrane of one of the lower animals, there would be few if any symptoms; but if the mucous membrane was denuded and the bacilli were then applied to it, a false membrane would be formed, but it would not extend beyond the denuded surface. Sometimes by the injection of the diphtheria bacilli the membrane would be made to spread farther. If these animals lived long enough, they would suffer from paralysis, and this would occur even when they were inoculated with almost any other organism. If the diphtheria bacillus was injected into the subcutaneous tissue, the animal would die; if the fatal termination was postponed for some time, there would be first an infiltration at the site of the injection, and then a slight hydrops of the pericardium, pleura, and peritoneum. These were not characteristic of diphtheria in the human being. It would also be found that there was cloudy swelling of the muscles, kidneys, liver, and other organs; but the same was true of almost any infectious disease. If the animal lived sufficiently long, necrosis would occur at the site of the injection, but no one had yet been willing to place himself on record as saying that the bacilli so introduced in the lower animals had increased at all in number. Kittens, young chickens, and dogs sometimes die of a disease presenting the usual clinical features of diphtheria—*e. g.*, diphtheritic membrane and paralyses—but the bacillus present here and capable of reproducing the disease was unlike the diphtheria bacillus. In diphtheritic inflammations of the conjunctiva we rarely found diphtheria bacilli, and the same was true in most cases of diphtheritic otitis. If a person had a slight ulceration in the throat, and a twenty-four-hour diagnosis showed diphtheria bacilli, the conclusion would be that the case was one of true diphtheria. It was on such diagnoses that many cases were reported as having been cured of diphtheria by the use of antitoxin.

Typhoid Fever Without Intestinal Involvement.

The editor of the Philadelphia Polyclinic says:

The progress of bacteriologic science has done much to clarify our notions concerning disease processes in general, and to enlarge our special pathologic conceptions. We have learned, among other things, that infectious disorders are, as a rule, local processes primarily, although they may become generalized as a consequence of dissemination of the causative micro-organisms through the blood stream. Such phenomena of constitutional disturbance as may be present are readily explicable by the secondary intoxication that takes place as a result of bacterial activity.

While pathogenic bacteria occasion, as a rule, specific infections, it is recognized that these may assume various forms, in accordance with the seat of localization and other influences of less obvious nature. Thus, the pneumococcus may give rise, not only to pneumonia, but to meningitis as well; the tubercle bacillus may find lodgment and unfold its activities not only in the lungs, but also in glands, bone, serous and synovial membranes, etc.; the streptococcus pyogenes may cause not only erysipelas, but it

may give rise to suppuration as well. By analogy we are thus able to understand how, for instance, typhoid infection may take place without involvement of the bowel. Cases have been reported in which, although there was swelling of Peyer's patches, there was no ulceration; but a case has been reported in which Peyer's patches appeared not to be involved at all. That it was a genuine case of typhoid fever was proved by the serum test and the non-involvement of Peyer's patches was discovered at the post-mortem.

When to Amputate in Preference to the Usual Operation for Lacerations of the Cervix Uteri.

Dr. Emmet, in a paper read before the American Gynecological society, stated that his operation had now been practiced thirty-five years; that it had been so well tested that its usefulness demanded no defense. When properly performed in suitable cases it gives the best results. There were, however, certain conditions which might be remedied better by another operation. For a long time he had thought that careful local and general treatment could cause complete involution, but he now believes that some cases were better treated by amputation and careful after-treatment. This latter was very important. The stump should not be left to cicatrize. In cases where the nutrition might be so much impaired that no cure could be obtained until the local cause had been removed, in these early surgical treatment was demanded. The patient should first be given the benefit of local treatment and the cervix saved if possible. When the accepted operation could be employed with success it should be performed, but the long existence of local changes might contraindicate it. Preparatory treatment was most important, and the final result depended upon it. When scar tissue had been removed in operating, the flaps sometimes could not be apposed well because of cysts, but their puncture would often obviate the difficulty. In many cases that it was wrong to shut up such diseased tissue from drainage marked reflex symptoms would frequently follow, and the uterus increase in size. When the cervical tissues were soft and friable the need of amputation might not be recognized until trachelorrhaphy had been begun, and would not be appreciated even then by the average operator unless he went sufficiently deep. Dense tissue was found by deep incision, and might be removed in a single piece. If the cervix was very soft, dense tissue would exist along the periphery, towards the canal and in its angles. It was different from the homogeneous tissue in the scar, more dense and would cut like sole leather. With such a condition a uterine canal could not be formed satisfactorily; the sutures would cut out. This induration could not be relieved by local treatment. In performing the amputation the cervix should be removed until healthy tissue was reached. Asepsis should be as rigid as possible. In conclusion he stated that while twenty years' experience had shown that amputation was sometimes preferable, the old operation should be done whenever possible.

The Motor Activity of the Stomach.

It is well known, says the Hospital, that the stomach has but small powers of absorption for many substances. Probably in man, as in some other animals, little, if any, water taken by the mouth passes through the lymphatics of the stomach. Meltzer shows that when the pylorus and cardiac orifices are occluded no poisoning by strychnine takes place, even if large doses are given, but prussic acid is absorbed directly. Thus, in rabbits at least, absorption of strychnine takes place in the small intestine and not in the stomach. The same writer also investigated the manner of absorption from the peritoneal cavity. Of late it has been thought that this takes place through the blood-vessels, but he shows that small quantities at least, are taken away by the lymphatics, and even large amounts often disappear through the same channels, but this varies with the individual. Even after death absorption takes place through the lymphatics.

The motor power of the stomach is undoubtedly the most important, but Meltzer finds that its contraction is chiefly carried out at the pyloric end, while at the outer end of the fundus an area exists where neither natural peristaltic waves nor contractions from direct or indirect electrical currents can be produced. Thus the activity of the stomach is chiefly confined to the right half of the organ, and cicatrices or new growths in that portion produce effects quite different to those occurring near the cardiac end.

The phenomenon of merycism has been explained in various ways as a survival of true rumination in ancestors, or as a means of overcoming an excess of acid. Boas, however, found cases where the acid was deficient and Einhorn one where the acidity was sometimes deficient and sometimes in

excess. Treatment, the latter says, should include an analysis of the stomach contents. Acids or alkalies may then be given in accordance with the results. H. Miniassian records a case of rumination where achlorydria existed with abnormally rapid passage of food through the stomach. He suggests that here the excessive motor activity of the stomach was the cause of the merycismus; at all events, the affection ceased when the patient was treated with hydrochloric acid after meals. It is curious, as Einhorn remarks, that the great majority of recorded cases, some 120, have been in males.

A New Mechanical Treatment for Phthisis.

Jacoby, (Edinburg Medical Journal), starting from the fact that phthisis affects first those parts of the lungs worst supplied with blood, argues that the course of the disease may be favorably influenced by improving the flow of blood to the apices. He considers that the deficiency in blood of these parts is largely to be attributed to the influence of gravity, and that its ill effects result from the absence of the natural protective mechanism. the blood containing alexines and similar necessary bodies. The erect posture is thus favorable to apical phthisis, which is commonest in man and monkeys; similarly the longer the chest the greater the resistance to the entry of blood into the apices, and the consequent liability to tuberculosis, which is also favored by the sitting posture. It is curious that kyphosis, although usually of tuberculous origin, leads to pulmonary congestion, and is hence but rarely associated with phthisis. The author's object is to determine the flow of blood to the apices, just as Bier determines it to the region of tuberculous joints; to this end he employs two methods, a thermo mechanical and a postural. the latter with the object of effecting what he calls an "autotransfusion." The apparatus for the former consists of a bath bed in which the patient lies, so that the shoulders and consequently the apices are the most dependent parts. The thorax is enclosed in a hermetically sealed india-rubber vest, under which hot water is allowed to play through eight tubes, four in front and four behind, connected with a pump. The shoulders and loins are supported by air cushions. The water is passed by a pipe back to the heating apparatus, by which it is maintained at a constant temperature. This is at first 30 deg. to 35 deg. C., but is gradually raised to about 45 deg. C., which is found to give the best result; two baths, each of thirty minutes duration, were given daily. The immediate results were greater comfort and ease in respiration and expectoration; the headache which followed in some cases was due rather to the position than the treatment, which the author regards as conditioning a hyperæmia of the lungs, particularly the apices. After the hot affusion is over, the patient gets up, is rapidly and thoroughly dried, and his shoulders are wrapped in a Winternitz's moist bandage; he then undergoes the recumbence cure, or autotransfusion. This consists in being supported with the legs and body elevated above the chest for two periods of three hours each per diem. By a hammock device this part of the treatment can also be carried out during sleep. By these combined treatments Jacoby claims that better nutritive conditions are established in the pulmonary parenchyma, further wasting is checked, the tubercle and other bacilli are destroyed, and a more perfect moistening of the bronchial mucous membrane effected. Hence the sticky secretion becomes more fluid, and expectoration much easier. The raising of the legs above the thorax must be gradually increased; hæmoptysis is almost the only contraindication to the treatment. The author gives figures illustrating the apparatus made for him for its performance. Of twelve cases treated by Nahm in this way at the Rupertshain sanatorium, two could not continue with it (probably from its being pushed too rapidly), but the others were all improved, though the changes in their symptoms and physical signs varied very considerably. The author concludes his paper with a suggestion that the prophylaxis against phthisis might be greatly aided by a periodical systematic examination of the population.

Bunion.

Syms, in a recent issue of the New York Medical Journal says the cause of this deformity of the foot is the wearing of shoes which are faulty in shape, or are ill fitting. A shoe that crowds the toes together or pushes the great toe backward will tend to produce this trouble. In this class are shoes with the following characteristics: First, shoes with narrow points, with the point in the median line; second, shoes that are too short; third, shoes that are so loose at the instep as to allow the foot to ride forward, and thus bring direct backward pressure on the toes; fourth, the worst of all, are shoes which combine two or all of these defects.

This deformity has been ascribed to osteo-arthritis, to suppurative arthritis, to rheumatism, and to gout; but bad shoes are its

cause, and the arthritis is the result of the displacement they produce and of the injury they do to the joint.

The condition will vary a good deal in different instances. In mild cases there is but slight deflection of the toe outward, and little or no dislocation. From this stage or degree on, the increased deformity is owing rather to pathological changes than to mechanical conditions. A chronic arthritis is established. The internal lateral ligament is stretched, the external one is contracted. The joint surfaces may become eroded or eburnated. The weakened support finally allows complete dislocation, so that the toe will lie at an angle, perhaps a right angle, across its fellows. The tendons will of course become displaced. Some surgeons have made the mistake of considering the displaced sesamoid bones (in the tendons of the flexor brevis) as the cause of the trouble and not as one of the results.

In operating the writer makes an incision about an inch in length on the dorsum of the toe. In a mild case, after retracting the tendon of the extensor proprius pollicis outward, he chisels off all the overprominent portion of the inner side of the head of the metatarsal bone, removing as much bone as is necessary to do away with all protuberance; he then sutures the wound and lets it heal under one dressing. Usually the patient can walk about after the first week.

In more severe cases, where there is a marked adduction as well as lateral dislocation, Syms removes the head of the metatarsal with a chisel or bone forceps, and also cuts off the prominent inner side of that bone. To resect the head of the metatarsal bone it will be necessary to divide the lateral ligaments and completely dislocate the toe. This can be done with ease and satisfaction through the simple straight incision described. It is necessary to remove so much bone that the toe will readily come into place and have no tendency to displacement. If this is not accomplished by the first ablation more bone must be removed.

The dressing must be carefully done and close attention given to the after treatment, which should include the application of a plaster splint. The writer advises never to operate during an acute attack of inflammation; always to treat the deformity, and never to operate on the bursa, for it will take care of itself after its cause is removed —the exceptions to this rule are the removal of callosities from the bursa when they exist, and the incision of bursæ when they suppurate; never to make the operation incision around or through the bursa.

Notes on the Diagnosis and Treatment of the Female Urinary Organs.

Skene (American Journal of Obstetrics) after emphasizing the importance of a study of symptomatology, speaks of the advantages of the galvano cautery in treating morbid growths and ulcerating tissues of the bladder. He praises the ease with which its action can be limited to the diseased tissue, and the manner in which the eschar protects the tissues from contact with the urine. He also describes a method of destroying neoplasms by seizing their pedicles with a specially devised forceps clamp and then devitalizing the tissue of the pedicle by the application of a desiccating degree of electric heat. He reaffirms his belief in the value of the operation prescribed by him a number of years ago for the relief of cystocele, which consists of a small buttonhole incision through the vaginal wall at the junction of the urethra and bladder; a probe is then passed upward between the vaginal wall and bladder to the cervix uteri; this is followed by a closed forceps which is extended within the tissues thus making an extensive submucous separation between the vagina and bladder. The mucous membrane of the bladder is then held out of the way with the probe while the raw surfaces beneath the vaginal mucous membrane are brought together by through and through stitches, thus taking a tuck in the end of the anterior vaginal wall. He further notes several interesting cases in which when a ureter was divided during hysterectomy and the bladder at the same time opened, spontaneous cure and closure of the resulting fistula followed.

Streptococcic Toxin and Anti-streptococcic Serum.

Dr. Schenck has published in the Klinische Wochenschrift an interesting account of experiments made by him with streptococcus cultures. He found that the effects produced on rabbits by identical quantities of such cultures were far from being uniform. He also made a series of experiments in which virulent injections were given twenty hours after injections of serum, the result being that of sixty rabbits so treated twenty-three survived. These experiments might be called prophylactic; in curative experiments, on the other hand, only two animals survived out of twenty-one. Dr. Schenck also investigated the relation of the streptococcus to erysipelas. As intra-peritoneal and subcutaneous injections of virulent fluids caused only trifling local changss he experimented on the ears

of rabbits and came to the conclusion that it was not possible to produce erysipelas with Marmorek's streptococcus, although it may be produced by the streptococci obtained from a phlegmon. In the experiments on the prophylactic or protective power of anti-streptococcic serum one c.c. of it was injected into the ear of a rabbit, and this was followed by an injection of one c.c. of streptococcus fluid in from sixteen to twenty-four hours; the result was a slight erysipelas; and the same was the case with a second rabbit which was injected with two c.c. of serum and one c.c. of streptococcus fluid. In a further series of similar experiments there were three deaths in cases in which the quantities of serum injected were respectively one c.c., two c.c., and two c.c., the quantiry of streptococcus fluid being one c.c., so that the serum obviously failed to prevent infection. According to Bordet there is a morphological property of streptococci which deserves attention, some that are found in the cardiac blood of rabbits having a capsule and being larger than those which have no capsule.

Serumtherapy in Puerperal Infection

Wallich, in a paper read at the congress at Moscow, comes to the following conclusion in regard to the use of serumtherapy in puerperal infection, (University Medical Magazine.) After the good results which Marmorek has obtained experimentally with his very strongly prepared antistreptococcus serum, the hope seems warranted that this means will prove efficacious against the infection that arises from the streptococcus so frequently in childbirth.

His examination extended only to the point of ascertaining whether Marmorek established and demonstrated that antistreptococcus serum is a powerful prophylactic or healing medium against puerperal infection. After careful examination he comes to the conclusion that the mortality, after a methodical use of Marmorek's serum, remains substantially unaltered. Notwithstanding the increase in the amount of injection fluid, even to 750 cubic centimetres, he still found no reason for altering the hitherto customary method of treatment for puerperal infection.

Pinard, however, saw better results in the year of 1897 from the use of Marmorek's serum than in the year preceding.

Weinistein (of Odessa) reported some experimental tests made with Marmorek's serum. He injected cats with the serum, after having previously introduced streptococcus cultures within the cavity of the uterus. As a result of his experiments he came to the conclusion that the serum acted more as a prophylactic than as a healing remedy, and that the use of large doses and very early treatment are necessary. Zamschin, von Ott, La Torre, Carbajal, and Pinard participated in the discussion. They mostly agreed with Wallich that the streptococcus serum has not yet been sufficiently tested, and that, as a means of cure, it cannot yet be recommended. But the freedom from danger in the use of the remedy invites further tests.

The Country Slaughter-House as a Factor in the Spread of Disease.

Dr. C. W. Stiles contributes a useful article to the Medical and Surgical Reporter of Sept. 11, '97 upon this subject. The following is a summary of it :

1. A well-regulated system of slaughter-houses is as necessary to the public health as is a well-regulated system of schools to the public education.

2. Every slaughter-house is a center of disease for the surrounding country, spreading trichinosis, echinococcus disease, gid, wireworm, and other troubles caused by animal parasites, and tuberculosis, hog cholera, swine plague, and other bacterial diseases.

3. The important factors concerned in spreading these diseases are offal feeding, drainage, rats and dogs.

4. These diseases may be gradually held in check and in some cases entirely eradicated in two ways : First, by a reduction in the number of premises on which slaughtering is allowed, on which account it is urged as all important that there be a segregation of the slaughter-houses, so that all the butchers of any given town will be compelled to do all their killing in a common inclosed and restricted area. In abandoning slaughter-houses, care should be taken to destroy the rats, in order to prevent the spread of infection. Second, by regulating the factors concerned in spreading the diseases; (*a*) Offal feeding should be abolished; (*b*) drainage should be improved; (*c*) rats should be destroyed; and (*d*) dogs should be excluded from slaughter-houses.

5. A licensing of slaughter-houses by the State boards of health and the employment of an assistant State veterinarian, whose sole or most important duty shall be a sanitary supervision of all places where animals are slaughtered for food, are necessary.

6. The appointment on every local board

of health of a competent veterinarian, whose duty it shall be to control the class of meat placed upon the block, is urged. All meats should be inspected at the time of slaughter, thus securing for the local consumer the same guaranty that the National Government provides for the foreign consumer and for inter-state trade.

7. The prohibiting of the raising of any kind of stock within the premises of slaughter-houses is advised, as are also State regulations to the effect that when a stock animal (horse, of course, excepted) once enters the premises of a slaughter-house it must never be allowed to leave those grounds alive, but must be slaughtered within two weeks' time.

8. It is advisable to use more substantial building material in the construction of slaughter-houses.

9. The country slaughter-house is more injurious to the farmer than to other classes, as he is less able to meet the dangers involved, and on this account he is urged to take the initiative in calling for a better regulation of places of slaughter.

10. When a farmer kills stock for his own use, he should burn or bury the offal, or cook it in case he feeds it to hogs.

Pure Caffein with Digitalis as a Diuretic in Children.

Treatment states that Siegert has convinced himself that salicylate of soda generally diminishes the secretion of urine, and, when given with caffein, the diuretic action of the latter is lessened.

The inhibitory action on renal filtration of salicylate of soda was observed in a child aged 9 years, who was suffering from ascites and anasarca, due to hepatic disease, and chronic peritonitis. The kidneys were healthy.

In this case the administration of salicylate of soda invariably produced diminution of urine and increase of dropsy.

Diuretin (a double salt of salicylate of soda and the theobromine) only feebly stimulated the urinary secretion.

Salicylate of caffein acted better, but did not reduce the œdema.

On the other hand, when after aspiration pure citrate of caffein was given in doses of 0 gr. 10 centigr. six times a day, the dropsy remained absent, so that it was unnecessary to have recourse to abdominal puncture again.

Further observations led M. Siegert to believe that the diuretic action of caffein was increased by giving small quantities of digitalis with it.

He uses the following formula :

Caffeine, pure, 0 gr. 10 centigr.

Poudre de feuilles de digitale, 0 gr. 0.2 centigr.

Sucre, q. s.

Divide into 12 powders, of which five are given daily to a child of 10 years.

This treatment is indicated in all cases of dropsy due to venous stagnation, provided that the renal power of filtration is intact.

The General After-effects of Ether.

Dr. J. B. Blake has given considerable attention to this subject.—(Boston Medical and Surgical Journal.)

Of 158 cases in which the vomiting alone was investigated—in 53 it was present, about 33 per cent.

More than once it happened that patients in excellent general condition vomited more profusely after a short, simple operation than others who were on the table for more than an hour.

In regard to the severity of vomiting—it was present in moderate degree in a large majority of cases; in these cases the patient vomited only once or twice, and at times the vomitus consisted only of mucus. It might be said that vomiting was considered present if there were spasmodic contractions of the diaphram or if only a small quantity of mucus was discharged from the mouth. In about 15 per cent. of cases the vomiting was severe, but in none dangerous.

How or why ether produces vomiting has not been definitely shown. In a general way it is supposed to be in proportion to the amount of ether administered. It must also depend, to a certain degree, upon the constitutional peculiarities of the patient. The age of the patient apparently has no influence. It has seemed to the writer that vomiting is present to a considerably greater extent in private than in hospital patients, and apparently it is certain that the more skilful the etherizer, the less and less frequent will be the vomiting.

In 94 patients the condition of nausea was investigated. It was present in 38. The nausea was usually moderate in amount, and, as a rule, did not cause great discomfort.

Of 94 cases headache was present in 36. In many of these it was extremely slight, and would never have been elicited except by leading questions. It was almost invariably frontal—sometimes extending to the vertex, but very rarely to the occipital region. In 2 cases it was unilateral. It did not bear a constant relation either to the

vomiting or the nausea. Its duration was, in the majority of cases, from two to six hours.

Cough was investigated in 94 cases; was present in 20 cases, and severe in 3. In these three there were moist rales in the lungs, particularly in the backs and basis of both sides, without dullness, and lasting from twenty-four to forty-eight hours; two of these patients complained of soreness in the chest. The others as a rule did not complain of cough until asked about it. It continued from three to six hours as a rule, and could not be found to bear any constant relation to the other symptoms above noted. The so-called ether-bronchitis was certainly not present in more than three cases, and it was noted that those patients in whom mucus and froth were present in mouth and throat in large quantities during etherization, were not the cases in which cough was most annoying. As a rule there was but little expectoration, and often none at all.

It is interesting to notice that 94 cases carefully examined, only 20 were free from all unpleasant after-symptoms. If this is true in this class of patients, who are as a rule strong, healthy, and not given to exaggerating symptoms, it is more apt to be true of private cases, who are more easily influenced by irritants of any sort, who suffer pain more acutely, and usually look forward to an operation with considerable apprehension.

Certain drugs, especially atropine sulphate, in 1.60-grn. doses, especially tend to diminish the vomiting, as well as the excessive secretion of mucus. Absence of food before and plenty of air during etherization also tend to minimize it. But how to eradicate it is not evident.

The Treatment of Incontinence of Urine in Children.

Dr. J. A. Coutts, in Treatment, states that the vast majority of cases of nocturnal incontinence can be relieved by waking the child at stated intervals to micturate. Restriction of liquids during the latter hours of the day will help. But in a few cases this seemed to keep up the disorder, the vesical mucous membrane being evidently intolerant of the highly concentrated urine so produced. In obstinate cases if the urine is of high specific gravity and acidity then the child should be encouraged to drink freely towards the end of the day. A signal success may be thus achieved. Of drugs belladonna still is foremost, but it often fails. This sometimes arises from the common method of giving several doses during the day. A much more efficient one is to give one single large dose in the evening, which can be gradually increased every four or five days, and when the incontinence ceases gradually diminished. If belladonna fails recourse must be had to other drugs. Of these he places most reliance on lycopodium, the merits of which have been as yet but little recognized. He gives twenty drops of the tincture three time a day to a small child, and increases the dose gradually to a drachm. Possibly more could be given. He knows of no poisonous properties attaching to the drug, but admits he may be at fault in that respect. In ordinary cases bromide of potassium has proved of less service to him than to some others. But there are cases in which it may prove of the utmost benefit—those in which micturition occurs when waking is imminent or takes place. He has seen but little benefit from strychnine, but in combination with iron in cases accompanied with anæmia and lassitude it has been of great service. When drugs fail there remain other methods. In many instances micturition does not occur while the child lies on his side, but immediately when he turns on his back. Here a bobbin strapped over the lower spine is effectual. Circumcision is to be recommended only where there is undue tightness of the prepuce.

Perityphlitis and Appendicitis in Their Relation to Obstetrics and Gynecology.

Memde has called attention to five points in the pathology, diagnosis and treatment of appendicitis occurring during pregnancy and labor. (Am. M. S. B.)

1. The possibility of the occurrence of appendicular inflammation, either as a new disease or as a recurrence of a previous attack, at any time during pregnancy or during labor and the puerperal state.

2. The induction of abortion or premature labor by acute appendicitis, in consequence of local irritation or through the fatal effect on the ovum of the hyperpyrexia.

3. The difficulty of the diagnosis of the true nature of the case, especially when the pain in the right iliac region is marked by normal labor-pains, or when the attack occurs after delivery and the high temperature may be mistaken for that of puerperal septic infection.

4. The necessity for prompt surgical interference, whether the attack occur during labor or the puerperal state, in order to avoid

the danger of an intraperitoneal rupture of the abscess.

5. The danger of a greater mortality owing to postponement of operation in consequence of difficulty in diagnosis, or the risk of general infection.

If labor is in progress there should be even less delay than usual, since the uterine contractions may cause rupture of the abscess by traction. The difficulty of diagnosis when marked by septic puerperal symptoms should be borne in mind. With the pelvic organs healthy, there is no more difficulty in diagnosing appendicitis in the female than in the male, unless the appendix is unusually long and misplaced. Ordinarily in appendicitis, the pain, tenderness, and swelling are limited to the spot just above and within the crest of the right ilium and only rarely can the exudate be perceived through the vagina, in which case it may be difficult to distinguish it from perisalpingitis, adherent pyosalpinx, or pelvic cellulitis. There is scarcely a decisive sign by which perisalpingo-oóphoritis and appendicitis may be differentiated, except the location of the original pain. In the latter affection, it is never in the pelvic cavity or close to the uterus, but may be in the right iliac fossa, at McBurney's point, in the epigastric region, the left iliac fossa, or over the whole abdomen. Vagino-abdominal palpation does not cause pain in appendicitis, unless salpingo-oóphoritis coexists. When the original exudate of an appendicular abscess has broken down, it is usually found limited to the normal size of the appendix. It may burrow upward or downward, or point in the median line, or through the right vaginal or anterior rectal wall. In these cases, its fetid odor and thin sero-purulent character may cause a suspicion of its origin. A pyosalphinx or pusovary adherent to the peritoneum in the right iliac region, or a small ovarian cyst with twisted pedicle may simulate appendicitis. The author has never been able to palpate the healthy appendix, but does not doubt that with very thin and relaxed abdominal walls this may be done, as we can often feel the normal Fallopian tube under favorable conditions. Diagnosis having been arrived at between appendicitis and perityphlitis, as against salpingo-oóphroritis, treatment should be conducted on the lines laid down for such affection. If in doubt, he prefers making the incision in the right semi-lunar line, since, if it proves an appendicitis, this is the shortest way to the seat of the disease; and if salpingo-oóphroritis, pyosalphinx or ovarian abscess, the diseased organ can quite as easily be removed as through a median incision.

Early Nervous Symptoms in Pott's Disease

Grognot has collected a series of observations of considerable importance on various early symptoms of spinal disease, in order to show the ease with which an erroneous diagnosis may be made (British Medical Journal). The painful symptoms of the early period of the disease are very variable and are rarely referred to the vertebral column. They consist in radiating pains following the course of a nerve trunk in the neck, throat, abdomen, upper or lower extremity, and are characterised according to the individual case by a sensation of constriction, burning, tearing, or stinging. These radiating pains vary considerably, being sometimes intercostal or at other times of the character of girdle pain, and in the lower limb they simulate sciatica. They are apt to alter in position, and on this fact the author lays considerable stress: thus, intercostal pain on one side, which might be confounded with other conditions, more particularly pleuritic, but when appearing in corresponding position on the other side, will give an indication of its probable nature. Pain along the course of one sciatic nerve would warrant the diagnosis sciatica, but when the opposite side becomes affected a graver lesion must be suspected. More difficult of diagnosis are certain superficial or deep localized areas of pain which do not correspond with any particular nerve distributions, and which may be situated in any part of the trunk. In character, they are dull, indefinite, and eratic in their duration. The importance of these is not great by themselves, but at the same time they have been mistaken for muscular rheumatism, lumbago, etc., and the author states that in some cases they have been explained as reflex from lesion of an internal organ. Sometimes arthralgia is observed appearing suddenly without any premonition, and, according to Grognot, the knee is the joint most frequently attacked. Their duration is variable, and it is not surprising that the diagnosis of rheumatism has been made in such cases, and, if treated accordingly, the result will be *nil*. There may be pains in the limbs very similar to the lightning pains of tabes. In certain cases the pains may come on in crises of extreme violence, and intermittent in character, and many cases have occurred in which a diagnosis of renal colic or intestinal worms has been made, and cases are laso quoted in which there has been veritable gastric crises causing considerable difficulty of diagnosis. Such, of course, are exceptional, for generally speaking the referred pain of spinal disease is more constant in character, and

usually follows some movement or effort, and they are rarely affected by ordinary treatment. An important fact to bear in mind is that these pseudo-neuralgic pains are more common in adults than in children. It is not uncommon to find these pains accompanied by muscle wasting. There may also be motor symptoms in addition, such as paralysis of irregular distribution in the limbs. In very many cases there will be other indications outside the nervous system of the nature of the disease, such as pulmonary tubercle, tuberculous nephritis, etc.; but the author observes that there may be considerable difficulty in the early stages in arriving at the diagnosis of vertebral disease, and it is at this period that diagnosis is most important.

Renal Surgery.

Obalinski, in the Lancet, gives details of seven operations on the kidney, and recently performed by him, as the result of which he has arrived at the symptoms and signs presented, such as pain, enlargement of the kidney, and dislocation with simultaneous changes in the urine lead customarily to an indication as to which of the two organs is affected. It is only in exceptional cases that this requires the use of the cystoscope to decide it according to which ureter is passing pure and which pathological urine. It is only in exceptionally well-marked and rapidly progressive cases that an accurate diagnosis and certain therapeutic indications can be obtained by means of the ordinary methods of investigation; very often, and particularly in the early stages, direct inspection by exposure or incision of the kidney must be added. If it is difficult to tell whether the kidney or another organ (for example, the gall bladder) is affected, an exploratory laparotomy should be made; if, however, the question is simply the extent of the kidney lesion, exposure of the organ by the retroperitoneal route will suffice. The kidney is so important an organ that it should only be sacrificed when it contains some growth absolutely dangerous to the whole organism, or when the morbid process has rendered it entirely useless. The author recognizes only two absolute indications for nephrectomy—enlargement of the kidney by new growth or tubercle. Other conditions, revealed when the organ is exposed or incised, may afford relative indications. Observations made in the course of nephrectomies show that a kidney which before operation can be recognized as enlarged and hard, is as a rule quite or almost functionless, whereby we may often get an indirect insight into the functional capacity of the other kidney. As the modern tendency is conservative and in favor of nephrotomy rather than nephrectomy wherever possible, the separate investigation of the urine of the two sides is seldom called for, particularly as Pawlik's procedure for the purpose is difficult and often uncertain. Obalinski goes so far as to say that nephrectomy is contra-indicated if nephrotomy does not show that the persistence of the organ in the body is a danger to life. Nephrectomy is of course contra-indicated in other conditions, as when the other kidney can be shown to be absent, when both kidneys are affected by the same disease, when the bodily strength does not permit so radical an operation, or when the kidney capsule is tightly adherent to other organs.

The Frequency of Complications in Gonorrhea.

Colombini (British Medical Journal) records the results of a careful statistical inquiry as to the frequency of local complications in gonorrhea. He took account not only of epididymitis, prostatis, etc., manifesting themselves by marked symptoms, but examined each case carefully externally and *per rectum* for the objective signs of disease. He found slight and painless lesions of some sort in 62.5 per cent. of cases examined, and came to the conclusion that posterior urethritis which led to epididymitis affected the whole generative tract on the way. Thus the prostate was frequently tender, and generally or locally enlarged. the vesiculæ seminales hard, better marked than usual, and a little painful, and the prerectal part of the vas deferens converted into a hard and somewhat tender cord. The author somewhat summarizes investigations into 400 cases, in 160 of which the gonorrhœa was acute, in 180 subacute, and in 60 chronic; in 92.8 per cent. the disease had spread to the posterior urethra. Lesions of the prostate, vesiculæ seminales, or prerectal vas deferens were present in 141 cases, or 35.25 per cent; of the acute cases, 45, or 28.12 per cent., were affected; of the subacute, 72, or 40 per cent; and of the chronic 24, or also 40 per cent. Of the 141 cases, 88 had prostatitis, 5 vesiculitis, 46 both prostatitis and vesiculitis, and 2 both these with pelvic vasitis as well. Of the 45 acute cases, 32 had prostatitis alone, 1 vesiculitis alone, and 15 (? 13) both. Of the 72 subacute cases, 35 had only prostatitis, 4 only vesiculitis, 28 both, and 2 pelvic vasitis as well. Of the 24 chronic cases, 21 had prostatitis only, and 3 versiculitis as well. It should be stated that all the patients ex-

amined were free from the symptoms of complications, so that these were in every case latent. Great care was taken to exclude the possibility of the affections being due to any other cause. As regards prognosis, the author regards this as in general most favourable, but considers it possible that the inflammations may lead eventually to senile prostatic hypertrophy and other troubles of later life.

Medical Practice and Pharmacy in France.

According to the Lancet the law which at present governs the practice of medicine in France forbids the simultaneous practice of medicine and pharmacy even by a person who may be in possession of diplomas in both subjects. As the law expressly prohibits any mutual arrangement between a medical man and a pharmaceutical chemist, as well as any partnership between them for the carrying on of a dispensary or the sale of medicine, it is evident that this prohibition is applicable most of all to the case where the mutual understanding is inevitable—that is, to the case where the medical man and the druggist are one and the same person. Unfortunately the statute does not specify any penalty for infringement, but merely declare that arrangements of the kind already described are of no effect in a legal sense. The consequence is that the criminal courts cannot pass sentence on persons brought before them for practising both medicine and pharmacy, and the culprits have to be discharged although their guilt is manifest, so that the practice in question is to all intents and purposes authorized. This state of things might answer in places where there is no pharmaceutical chemist but would be unsatisfactory in towns, for the medical man is reduced to the position of a dealer in drugs and there is no proper supervision over the dispensing of prescriptions, as the responsible head of the establishment would not be in attendance; moreover, the prescriptions are no longer checked by a druggist who is able in the interests of the patients to correct any error which may have been accidentally made. The medical syndicate of Roubaix has accordingly just presented a petition to the State and the Chamber of Deputies praying for an amendment of the law passed three years ago to regulate the practice of medicine and pharmacy in France. This petition sets forth the arguments which I have just been enumerated, and mentions that the courts were formerly able to enforce the law by passing sentences of six months' imprisonment in such cases.

Chronic Arthritis.

According to Dr. Chvostek (Lancet) chronic arthritis does not depend on the presence of micro-organisms in either the joints or the blood. The finding of bacteria in the joints, either after death or when death is impending, proves nothing, and the hypothesis that a specific micro-organism is the cause of arthritis is untenable. The symptoms of the disease are not constant, the only characteristic feature being a swelling of short duration affecting a joint—a condition which may be induced by toxins altogether apart from living bacteria. On the other hand, Dr. Singer, who has examined the blood, the urine, and the articular exudation in ninety-two cases, states that both staphylococci and streptococci are to be found. In three instances post-mortem examinations showed the same bacteria as in the living subject; in one case the synovial membrane contained bacteria, but the exudation was free from them; in a third case there were hæmorrhages with numerous streptococci in the peri-articular tissue. These facts explain why in a great many cases the articular exudations are free from bacteria. The inflammation of the synovial membrane is symptomatic, the infiltration which contains the bacteria being frequently in the peri-articular tissue. Dr. Singer considers that the erythema multiforme which frequently accompanies arthritis is a typical pyæmic affection of the skin; he is opposed to the view that salycilic preparations have a specific action, and he has seen very favourable results produced by intravenous injections of a mercurial salt.

The Treatment of Eczema.

Thompson, in discussing this subject, says: Take care that all internal and external causes for tracheal irritation are removed, if possible, and the urine examined carefully for albuminuria, phosphaturia, oxyluria, glycosuria, or polyuria, occurring in the course of such diathetic conditions as lithæmia, gout, and diabetes. Have patient as much as possible in the open air, eat regularly of easily digested foods, the proteid constituents of which should be present in comparatively small amounts; and fresh vegetables are useful, such as the various salads, cresses, and similar substances. With eczema in the new-born, great care should be paid to the regularity of nursing and the clothes, particularly the diapers; and, also, as to healthy surroundings.

Purgatives have been much abused by the physicians of earlier times in the treatment

of eczema, but their moderate use, should constipation be present, is an absolute necessity. At first calomel may be given in small doses, or some of the neutral salines, or castor oil, or the preparations of senna. As diuretics it is well to employ some of the alkaline mineral waters, and to use to a great extent, a milk diet. Belladonna is sometimes useful in cases of eczema in which there is a profuse sero-fibrinous exulate. Under these circumstances two to ten drops of tincture of belladonna may be taken quite frequently.

Cancer of the Breast.

Dr. W. L. Rodma states that the results of Keen, Bull, Dennis, Weir, Halsted, and Powers, six American surgeons, who have within the year published their statistics in operations for cancer of the breast, show a mortality of less than one per cent. (six hundred and fifty-six operations and six deaths). He concludes his paper with the following propositions:—

First, all mammary growths should be removed at once, for innocent tumors, carried for a long time, become a menace.

Second, the complete operation should always be done in cases of malignant disease.

Third, in nearly every case it is simply impossible to detect enlarged glands until the axilla is opened. Keen says that he cannot do so once in ten times.

Fourth, the mortality should be, with average operators about three per cent.

Fifth, a radical operation should promise from twenty-five to fifty per cent. of permanent cures, according to the time when patients apply.

Sixth, when in doubt operate; never wait for symptoms.

Fracture of the Skull.

A. Baginsky ("Pediatrics"), reported the case of a boy three years of age who in attempting to slide down the baluster of a staircase, lost his balance and struck upon his head. Hemorrhage from the nose and mouth occurred at once, but the boy remained apparently well for eleven days, with the exception of some headache, and an occasional attack of vomiting. On the eleventh day coma suddenly set in. In this condition the patient was brought into the hospital. It was now noted that he had some paralysis and his respiration was abnormal. On the same day the patient died. Bloody spots on the forehead and on the scalp were found, but a fracture of the skull could not be determined. On the other hand, the suspected meningitis was verified by lumbar puncture, which yielded a puriform fluid.

At the autopsy a fracture of the skull was discovered. It took its course left of the frontal bone, through the left orbital bones, and continued by way of the base of the skull towards the right sphenoid bone; on this side the posterior and middle skull cavity was filled with blood. In the fluid obtained by the lumbar puncture, besides the staphylo and streptococci, Frankels diplococci were also found. The brain contained large quantities of pus, and its structure was to a great degree destroyed.

The Early Symptoms of Puerperal Infection.

Feré, in the Lancet, points out that the general notion of the sudden onset of marked symptoms of puerperal infection after a longer and shorter period of silent incubation is inexact. Even in the period of incubation important, although attenuated, symptoms may be present, and their recognition will greatly conduce to successful treatment. These early symptoms are: slight elevations of temperature occurring once (or twice) daily, and usually in the evening; a pulse rate of 80 or more, especially if in the morning, when the temperature is not yet raised; relative or absolute insomnia, which is a very important indication of serious infection and requires careful inquiry; headache, at first intermittent and slight, usually always in association with the other symptoms mentioned; sometimes diminution or suppression of the lochial discharge, although as a rule this is a later manifestation; and, finally, vague impressions of cold, but not usually a distinct rigor. The later symptoms, such as marked rigors, high temperature, local pain, etc., are well known; it is to the recognition of the early symptoms that we must trust for the successful treatment of such cases.

Syphilis and Tuberculosis.

Accounts of recent observations illustrate the difficulties in diagnosis between certain stages of these two allied diseases, both from the clinical and histological standpoints

A case was reported during the last session at the Pathological Society of London in which the diagnosis of certain indolent subcutaneous tumours was for long uncertain. (The Practitioner.) The chronicity and clinical appearances of the nod-

ules suggested their tuberculous origin, and the circumstances of the patient, as well as the history, seemed to exclude the possibility of syphilis, either congenital or acquired. At length one of the small tumors, about the size of an almond, was excised for diagnostic purposes. On histological examination there was at first difficulty in giving a positive opinion, for the granuloma contained giant cells, which might well have done duty as tuberculous giant cells, and little of the characteristic degeneration of an ordinary gumma was obvious. After repeated examination of several preparations, the opinion stated was, that the growth was of syphilitic origin—a diagnosis which soon received clinical confirmation, for a short time subsequent to the removal of one of the nodules the patient developed a gumma of the ordinary type in the epididymis, which rapidly underwent involution on the exhibition of potassium iodide, and at the same time the nodules in the skin similarly disappeared. In this case the difficulty in the histological diagnosis between certain forms of chronic tuberculosis and late chronic syphilis was well exemplified.

Dressing Suppurating Wounds with Sodium Carbonate.

Dr. Gueorguievsky has made the important observation that compresses, soaked in a 2 per cent. solution of chemically pure sodium bicarbonate, covered with some impermeable tissue, will stop purulent secretion and arrest phlegmonous inflammation more rapidly than all ordinary antiseptics, such as carbolic acid, iodoform. (Am. M. S. B.)

He discovered this remarkable property of sodium bicarbonate in a case of whitlow. There were phlegmonous inflammation of the index finger with extension to the palmar aspect, and œdematous swelling of the back of the hand and of the lower third of the fore arm. The finger was incised, and a great quantity of pus issued from the opening, which was afterward washed and plugged with a band of gauze, impregnated with iodoform ointment (iodoform, two grammes; balsam of Peru, four g'mes; oil of peppermint, four drops; vaseline, fifteen g'mes.), and the whole covered with an antiseptic dressing. In the evening of the same day, the suppuration was still very abundant, the palm of the hand very painful and of a leaden color. A sound was introduced into the opening, passed up beneath the tendon of the common extensor of the fingers, and on for eight centimeters under the soft parts of the palm. Dr. Gueorguievsky wanted to make a counter-opening at this point, but only succeeded in scratching the thickened epidermis, the patient having suddenly withdrawn his hand.

The surgeon then decided to postpone the operation, and, in order to soften the tissues, ordered the whole hand to be enveloped in gauze compresses, soaked in a two per cent. solution of sodium bicarbonate. Next morning, on examining the hand, he was extremely surprised to see that the condition was very different: there were no pain, no redness, no swelling of the parts: there was no trace of any suppuration on the dressing or in the wound, and not a drop of pus could be brought out by pressure on the finger or on the palm. The compresses—which the patient called "magical"—were continued, and the cure was completed in an extremely short time.

Since then Dr. Gueorguievsky has often treated in the same way cases of whitlow, or of other circumscribed or diffuse phlegmonous inflammation. He first incised the purulent collection, gave issue to the pus, and covered over the surface of the open wound and the whole inflamed region with compresses soaked in a two per cent, solution of sodium bicarbonate. In every insatnce, the pain and the suppuration were arrested, and cure was rapidly completed without the use of any drainage, which is so often the cause of intense suffering to the patient. In several cases it was possible to prove by direct experiments the superiority of sodium bicarbonate over the antiseptics which are in common use in the treatment of inflammatory lesions. Whenever, in these cases, the sodium bicarbonate was stopped and the iodoform ointment applied, the suppuration at once returned, but ceased again as soon as the sodium bicarbonate dressings were re-applied.

It is said that during the past ten years the number of medical students in the United States has increased from 10,600 to 17,600, and each year hundreds desert the ranks of the profession for lack of employment.

J. Parry, basing his opinion on the spectrum of iron and the effect of temperature on the spectrum, comes to the conclusion that it is not a simple element.

WANTED—TRUSTWORTHY AND ACTive gentlemen or ladies to travel for responsible, established house. Monthly $65.00 and expenses. Position steady. Reference. Enclose self-addressed stamped envelope. The Dominion Company, Dept. V., Chicago.

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IT CONTAINS NO TRACE OF ANY IMPURITY.—*The Lancet, London, England.*

A valuable aid to the physician in the treatment of all the graver forms of gastric and enteric diseases.—*The Prescription.*

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Endorsed by the best medical authorities in this country.—*North American Practitioner, Chicago, Ills.*

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IMPERIAL GRANUM has stood the test of many years, while many competing foods have come and gone, and have been missed by few or none. But it will have satisfactory results in nutrition far into the future, because it is based on merit and proven success in the past.—*The Pharmaceutical Record, N. Y.*

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JOHN CARLE & SONS, Wholesale Druggists, 153 Water Street, NEW YORK CITY, N. Y.

Treatment of Caries of the Spine.

Pubby, in Pediatrics, emphasizes three principles in the treatment of this disease.

(*a*) To fix the vertebral column.

(*b*) To remove the weight of the upper part of the body.

(*c*) To prevent unnecessary deformity.

To carry out these principles two methods are at our disposal, viz., recumbency and the use of appliances.

Recumbency has for its chief indication —relief of pain in acute cases, and, when the palm pressure test is applied to the back, it is found to be yielding anteriorly.

The advantages and disadvantages are dealt with, and the proper duration of recumbency. Under the heading of "Points to be observed in placing a patient in the recumbent position" he deals with—the material of which the mattress is made, air beds or water beds, retentive apparatus, the use of extension, the use of a couch or bed or a carriage, and the choice of position prone, or supine, the former to be chosen when bedsores are present.

Suspension of the head is absolutely essential in cervical disease. It can be arranged by carrying the plaster bandages of a Sayres jacket around the neck and forehead, leaving the face and vertex exposed, or a jurymast may be used.

Suspension should be employed when the disease is above the dorsal vertebra. This is very important.

Then follows a comparison of the advantages and disadvantages of plaster and poroplastic jackets respectively—generally speaking, the plaster has the advantage of cheapness and greater ease of application. But for a skilled hand the poro-plastic is the more desirable.

The paper is concluded by asking the very important question: "When may treatment be dispensed with in spinal caries?" He answers it under the following heads:

1. The absence of pain is no test—if pain returns on removal of the support the disease is not cured.

2. When the spine is firmly fixed and the deformity has remained stationary for several months.

3. If a recession of the deformity has been gained and maintained for several months.

4. If a compensatory lordosis, just below the kyphosis, is established.

5. Dorsal caries is very seldom cured in one year; cervical and lumbar may require less.

6. If the improvement in general health is maintained.

7. Supporters must always be worn longer in tubercular cases. If the support is worn too long, the muscles atrophy rapidly. In any case, begin to dispense with the support gradually, especially if the patient is increasing in weight.

Serotherapy of Malignant Neoplasms.

Dr. J. F. Sematzky says: "I have employed serotherapy in twenty-two cases of malignant neoplasms, invariably with negative results, a fact which leads me to believe that, in the few cases of malignant neoplasms reported as cured by means of injections of serum, an error in diagnosis must have been committed.

"To the question whether, if serum injections be not curative, they at any rate do some good, I must answer in the negative; they are absolutely useless. I may even go further than this and assert that they are injurious, on account of the danger of purulent, pyæmic or erysipelatous infection, although such complications, it is true, are but rarely met with. On the other hand, immediate intoxication by substances contained in the serum is of rather frequent occurrence, for serums extracted from the blood of various animals are toxic to human subjects.

"I am of opinion, therefore, that clinicians are not justified in employing for the treatment of malignant tumors any of the animal serums, hitherto prepared. Their use should for the present be entirely restricted to experimental medicine. Considering the popularity of sero-therapy, however, I think it is advisable to endeavor to discover a medium which, while containing the active elements of blood-serum, would be free from its dangerous properties."

Sanmetto in Inflammation of Bladder, Ovaries or Uterus.

Sanmetto is an excellent remedy for all bladder troubles caused by inflammation. I find it acts nicely with tinct. opii. to allay pain and inflammaiion, especially when the ovaries or uterus are effected. The physicians generally, about here, prescribe Sanmetto. LORENZO SARGENT, M. D.

Bradford. Mass.

"Robinson's Lime Juice and Pepsin" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods. (See page 652.) See remarks on their Arom. Fluid Pepsin also.

Lysol

A Safe and Powerful Disinfectant and Antiseptic.

Practically Non-Poisonous. Dissolves Clearly in Water. Used in 2% Solutions. Superior in Germicidal Power to Carbolic Acid.

E. BOECKMANN, M. D., in the Section of Surgery and Anatomy, at the 47th Annual Meeting of the American Medical Association, stated:

"Supported by further experience I can this year more strongly than last recommend the 1 to 2 per cent. solutions of LYSOL at 120° F. for combined mechanical and chemical disinfection of the operator's hands and the patient's skin.

LYSOL possesses the undeniable advantage of being at the same time antiseptic and aseptic; it is a happy combination of a powerful disinfectant and soap (saponified cresol). I know of no agent which at the present time is better adapted and more reliable in the disinfection of the skin than LYSOL."

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Intubation Before and Since the Use of Antitoxin.

Dr. Halsted, in the New York Medical Journal, reports thirty-four cases of intubation done prior to the use of antitoxin. Of these twenty-six died, eight recovered—mortality, 76 per cent.; recoveries, 24 per cent. Mortality under five years, 70 per cent.; recoveries, 30 per cent.

Twenty cases are reported as having been operated upon in conjunction with antitoxin. Of these cases five died, fifteen recovered. Mortality, 25 per cent., recoveries, 75 per cent. Mortality under five years, 30 per cent. The average time during which the tube was worn in the cases which recovered was a little less than five days.

From his experience the author draws the following conclusions:

1. Laryngeal diphtheria, in any epidemic, is never mild, but has always had a mortality of from 90 to 95 per cent., reduced by operation, intubation or tracheotomy, to from 72 to 76 per cent.

2. The report of his cases shows a mortality of intubations without serum of 76 per cent.; in conjunction with serum of 25 per cent., and, eliminating cases of death within twenty-four hours of injection, a mortality of 10 per cent. The reduction of mortality from 76 to 10 per cent. is to be credited to antitoxin.

3. Antitoxin should always be administered as early as possible, and in laryngeal cases without waiting for the bacteriologist's report. If this is done it will usually prevent an extension to the larynx, or, if the larynx is already invaded, an early injection will frequently cure without need of operation.

4. No child should be allowed to die of laryngeal stenosis without an operation, preferably intubation, and serum should be injected at once, regardless of the stage of the disease, as most desperate cases often end in recovery.

Bona Fide Testimonials.

That the commendation of a strong man carries with it great weight is a fact appreciated by all manufacturers, and whatever be their advertising policy, testimonials are sure to be a feature. But "strong men" are not anxious to have their names too often in print, though they do appreciate the excellence of a product, and wish to encourage the manufacturer. This has led our leading manufacturers, and prominent in this class The Imperial Granum Co., to withhold physicians' names when publishing testimonials. Published testimonials from this house are never signed, but the company guarantees that they are from men of repute, and stands ready to vertify the claim should it be questioned.

Intermittent Fever in Children.

Dr. H. B. Shiffeld, in the New York Medical Journal, concludes a valuable paper as follows:

"A few words regarding the administration of quinine to children will not be out of place. The writer has been in the habit of dissolving the sulphate of quinine in the white of an egg and administering it by the rectum. The white of the egg seems to prevent irritation and aid in the absorption of the quinine. The results were always excellent without unpleasant complications.

The contents of this paper may be summarized as follows:

1. Intermittent fever in children is mostly of the quotidian type; the chill and sweating stage being often masked, it is not infrequently overlooked; the spleen is rarely enlarged if quinine is administered early.

2. Genuine intermittent fever always presents the malaria plasmodium in the blood; its absence is due either to a technical error on the part of the examiner, or to the administration of drugs which are detrimental to it.

3. The existence of the varieties of the plasmodium described by some authors as peculiar to quotidian, quartan, tertian, etc., types of the fever is still a subject of great controversy.

4. Infection of malaria is conveyed through the air as well as by water. The mosquito theory of infection seems to be a mere hypothesis.

5. Malarial disease is endemic in most of the larger cities of the North, especially in New York; all doubts raised against it are not based upon scientific investigation.

6. Intermittent fever yields promptly to large doses of quinine, a point of considerable value in the diagnosis. Persistency of the attacks may be attributed either to the exhibition of quinine in too small quantities for too brief a period, or to its administration in the form of the mercantile, heavily coated pill, which is as a rule insoluble, and hardly ever enters into the circulation.

The Value of Antipyrin in Labor.

Dr. H. A. Hare, writing editorially on this subject, says:

The very extraordinary number of ailments in which antipyrin has proved itself useful leads one on one hand to believe all that can be said in its favor, and on the other to doubt the possibility of its proving efficacious in any additional conditions to those in which we already employ it. It is worthy of note, however, that very shortly after antipyrin was first brought forward as a pain reliever several clinicians suggested its use for the purpose of relieving the pains of labor. It is not surprising, therefore, to find that it has been largely used, and that we are now in a position to decide as to its pain-relieving powers in the parturient state. Increasing knowledge of this drug has certainly shown that whatever power for good it has is confined to practically one stage of delivery. It seems hardly necessary to emphasize the fact that it can under no circumstances supplant the ordinary anesthetics, and it must be remembered that the coal-tar products prove themselves useful in those forms of pain which may be called nerve-lesions, and are usually practically powerless in the pains of inflammatory processes. According to the studies of Misrachi it is a useless remedy for the pains of a perfectly normal labor, but finds its chief usefulness in those cases where the pains are so excessive as to reflexly interfere with the proper uterine contractions. In this condition he asserts that it is most efficient. Misrachi decides, too, that it is indicated in tedious labor when the pains are severe. He also believes that it is useful when the liquor amnii has been discharged too early and where there is rigidity of the os. In regard to the second stage of labor Misrachi concludes that antipyrin is useless. There is evidence, however, that antipyrin has considerable ability to relieve the so-called after-pains. It is also seemingly a fact that antipyrin may be used with some success for the purpose of quieting a tendency to the development of pains before the full term has been reached. If it is intended to use antipyrin for the purpose of arresting a threatened miscarriage, then its dose must be very large—as much as thirty or forty grains given in two or three doses of fifteen grains each at half-hour or hour intervals.

A New Package.

Owing to continuous requests from public institutions, such as asylums, dispensaries, hospitals, homes and infirmaries, the Norwich Pharmacal company, of Norwich, N. Y., will place upon the market, January the 1st, 1898, a new five pound tin to be known as hospital size and will retail for $4.75. This new package will doubtless be largely used by a great number of physicians outside of hospitals, as Unguentine is now recognized by leading members of the profession to be one of the very best Surgical Dressings in every case where there is inflammation, and is a valuable addition to the office, shelf or table.

Practical Evidence.

I used your sample of Resinol on myself for Pruritus Ani, which has been my curse for several years, defying all applications. The first application proved efficacious, and I am now using and prescribing Resinol for the above and several other itching troubles. In fact, I think it is the best remedy I have ever used for the diseases for which it is recommended.

H. B. LEIGHTON, M.D., Boston, Mass.

I have used your Resinol in Inflammatory Rheumatism with happy results. Hope others will try it. I know they will be pleased.

E. J. BURNSIDE, M. D., Phila., Pa.

It gives me pleasure to say that Resinol is the best application for local treatment of Eczema I have ever used. I can also bear testimony to its efficacy in Erysipelas, and its soothing and healing virtues in all inflamed surfaces.

A. S. FRENCH, M.D., Lawrence, Mass.

It is but just that I should attest my satisfaction with the use of Resinol. It is a marvel of efficacy in Pruritus Ani. In relief of soreness, due to scalding from acute Nasal Coryza, it acts like a charm.

J. H. THOMPSON, M.D., Goshen, N.Y.

Resinol is by far the best application I have ever used in a practice of 48 years for the diseases recommended. A case of Eczema commencing on the scalp and extending over the entire face and which had been under the treatment of various physicians with no apparent benefit, was completely cured by it in less than two weeks.

J. J. WORTHY, M.D., Lavalle, Wis.

I am very much pleased with the effects resulting from the use of Ung't Resinol in cases of Itching Piles, Pruritus Ani, and Vulvae, Eczema, Erysipelas, &c. In fact it is the remedy "par excellence" in all cases where there is a Congested or Hyperaemic condition of the capillary Blood Vessels. C. D. SMITH, M.D., Atlanta, Ga.

I frequently prescribe Resinol, and am well pleased with its work. It has proved very useful in many forms of eruption of the skin, and especially so in Pruritus Vulvæ or Ani, and in Eczema of other parts of the body.

LUCY HALL BROWN, M.D., Brooklyn, N. Y.

I take pleasure in stating that I have found Unguentum Resinol almost a specific for Pruritus Ani, Itching Piles and Marginal Eczema.

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Sample sent **free** on application, or **one** regular size jar for trial on receipt of 25 cents.

RESINOL CHEMICAL CO., Baltimore, Md.

Laceration of Vaginal Fornix in Labor.

Everke has reported 3 cases of complete laceration of the posterior vaginal fornix during labour, and now adds a fourth. (British Medical Journal.) The patient had one child; the first labour wss very lingering. On this occasion the medical attendant applied the forceds and could not extract the child. The mother had a narrow pelvis and the child was dead; on careful exploration, it was found loose in the peritoneal cavity, whence it was drawn out. The patient was greatly collapsed. The wound was drained, but she died. The uterus was found quite intact after death, but the vagina was uearly torn off it and the bladder badly injured. Everke holds that contraction of the pelvis is an important agent in the cause of puerperal laceration of the vagina. The fœtal skull is very firmly pressed against the upper part of the vagina when the pelvis is contracted but the pains strong. If a gynæcologist is called in to a case of this accident, after the child has been delivered he should push any prolapsed intestine upwards over the promontory, draw down the uterus, and sew up the laceration. Suture is the only method for stopping thoroughly the hæmorrhage, often very dangerous in these cases. Should the child be undelivered, it must be extracted first; and if it has slipped into the peritoneal cavity, abdominal section is the most rational means of extraction. Yet this can often be done easily from below, and then of course it cannot be expected that the doctor will open the abdomen in the lying-in room. One objection to that course in this complication is the difficulty of closing the vaginal laceration from above.

Functional Diseases of the Uterus and Appendages.

In the treatment of Functional Diseases of the Uterus and Appendages, Dioviburnia (Dios) holds a most remarkable curative influence in its marvelous tonic effect on the entire uterine system, and is therefore indicated in all abnormal conditions, whether dysmenorrhœa, amenorrhœa, menorrhagia, or any functional wrongs of women. Aching back, bearing-down abdominal pains, soreness of the lumbar region is an abnormal condition in which Dioviburnia is indicated, and should be administered in tablespoonful doses, three times a day in hot water.

Aseptolin-Edison in Malaria and La Grippe.

On the first day of treatment 200 minims are injected as an initial dose. This is delivered into the abdominal parieties in two injections of 100 minims each, on either side of the median line, the point of the needle being directed away from it.

On the second day and each day following, until and including the 7th day of the treatment, 100 minims are given (injected into the abdominal parieties in different places, first on one side of the median line and then on the other.) Then on every alternate day, for three alternate days, 100 minims are given in a like manner. On the 21st day a dose of 100 minims is administered, and finally the treatment is concluded with an injection of 200 minims on the 28th day as a final dose.

The use of Quinine by those suffering from malaria, is of such long standing and has such a hold upon the afflicted, that it would be a hard matter to convince them of the abuse to which it is put, and the deleterious results arising from an indiscriminate use of the drug. The after effects upon the nerves are very irritating given rise in many cases to deafness and impared visual powers.

In the treatment of this disease by the use of Aseptolin-Edson, no such after effects are experienced and the results are immediate and conclusive, thereby avoiding the necessity of loading up the system by a continual application of powerful drugs.

Dr. A. K. Norton, of Minneapolis, says, "The results of the use of Aseptolin on a patient who was a suffer of Malaria for seventeen years has been all that could be expected, as so far there has been no return of it. I am using it in two other cases, and so far the results has been gratifying."

Dr. G. H. Bridgeman of Elizabeth says, "I regard several cases of Malaria, which had for years resisted the most heroic treatments, as cured by one course of Aseptolin."

The Employment of Eucain in Laryngology and Rhinology.

By Dr. J. Fein.

After a detailed description of the properties and the employment of Eucain for various purposes, the author lays great emphasis upon the lesser toxicity of Eucain as compared with cocaine. The results hitherto published regarding the employment of Eucain in rhinological and laryngological operations, Dr. Fein thinks, may not have been sufficiently convincing, as neither Forster or Zwillinger performed any very painful endolaryngeal operation or severe rhinoscopy under Eucain anæsthesia. In his own practice he has, however, operated in fifty-three cases of diseased larynx and throat, some of them extremely severe.

A 10 per cent solution of Eucain was applied in the nose by means of a cotton-wool pad, and in the throat with a hair brush. Generally, three paintings sufficed to suppress reflex action and render operatic measures painless. Although the anæsthetic action appeared neither so rapid nor powerful in development as with cocaine. the author considers very advantageous the absence of swelling of the mucous membranes, and, in consequence, the almost absolute suppresssion of post-hemorrhage. —*Wiener Klin. Wochenschrift, 1897. No. 22.*

Henry R. Slack, Ph. M., M. D., of La Grange, Ga., expresses (Atlanta Medical and Surgical Journal, Nov. 1897) a high opinion of Antitoxin as a preventive and curative agent in the treatment of diphtheria. His own experience in private practice bears out fully the favorable reports made to the American Pediatric Society by its special committee, and the clinical cases recited by him testify to the prompt and powerful action exerted by Antitoxin on both the local and constitutional symptoms of the disease. Dr. Slack concludes that the Anti-Diphtheritic Serum should be administered freely and promptly, as the loss of twenty-four hours may mean the sacrifice of a life. He recommends doses of from 1,000 to 2,000 units, according to the severity of the case, to be repeated in twenty-four hours if improvement is not manifest. A third dose may be given with perfect safety. Dr. Slack urges the use of the most concentrated strength of an absolutely reliable preparation. In his own cases he used Diphtheria Antitoxin of both foreign and domestic manufacture. He prefers that prepared by Parke, Davis & Co., for two reasons: 1. It is put up in hermetically sealed, large-necked, glass bulbs; 2. It can be obtained fresher, thus increasing its reliability.

Dr. Slack's article bears out the many tributes that have been paid to the Anti-Diphtheritic Serum of Parke, Davis & Co. on the score of its entire freedom from fatalities, casualties or complications of any kind; its great concentration, and the promptness with which its curatve powers are manifested.

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The Operative Treatment of Puerperal Fever.

It is well known, says "Treatment," that infection developing in connection with abortion or full time labor may result either in the condition of systemic infection, which we call puerperal septicæmia, or in localised suppuration in the pelvis, leading to the development of pyosalpinx, cellulitic abscess, suppuration in pre-existing small tumors, etc. The latter conditions are often spoken of vaguely as cases of "puerperal fever," but it is obvious that both in their nature and the results which arise from them, they differ widely from puerperal septicæmia. Lapthorn Smith has recorded several cases of localised pelvic suppuration after confinement. Two were cases of suppurating ovarian cysts, two were cases of suppurative inflammation of the appendages, and one was a case of abscess formation in the broad ligament. All were operated upon by abdominal section, and did well.

The appropriateness of the treatment adopted in the cases indicated cannot be doubted, and they serve to recall the fact that what we designate clinically "puerperal fever," is in reality a group of different pathological conditions, which call for widely different treatment. The operative treatment of general septic infection is anything but encouraging; localised suppuration in the pelvis should, however, be dealt with in the puerperium, on those general surgical principles which govern our action under other conditions.

What We Think of Pyroctin as an Anti-pyretic.

It affords us great satisfaction to know that we have found a first-class anti-pyretic that we can conscientiously recommend as being perfectly reliable and safe. Pyroctin does all that is claimed for it, and we might say even more. Such a preparation is a boon to the physician who recognizes the value of a good anodyne, antipyretic and febrifuge.

Pyroctin not only gives the most careful doctor good results, but does it in a way so pleasing and satisfactory to both himself and the patient. What a good doctor wants is to be up to date and in touch with good remedies that will materially assist him in his work of healing the sick, and we think we need only call his attention to pyroctin, advising his careful attention. A trial will convince any physician that our testimony is prompted by a natural appreciation of a good thing, that will readily speak for itself if given a chance.

Pyroctin has so many points of merit, but we will only call attention to a few. As a safe and reliable fever-killer and anodyne it has no equal, as it accomplishes so much, and yet it does not depress the heart's action. It is soluble in water, and has no disagreeable taste. It is not a new thing, that one knows nothing of, but is being used with big success by some of our best physicians, who value it as one of the best general remedies in the list of favorites.

We would like every reader of the Journal to give pyroctin a trial.

Treatment of Large Effusions into the Knee-Joint.

Dums recommends an active therapy for tense effusions into the knee-joint, either by puncture or incision. (Medical News.) Although massage, compression, etc., will in time cause the disappearance of the fluid, yet in the meantime the joint-capsule has been so long stretched that a return of the affection is probable. Even when the fluid is promptly removed from the joint there is still danger of a recurrence, and the limb should be protected from strain for some time by being very gradually brought again into service. Dum's plan of treatment is as follows: As soon as the fluid is removed a firm bandage is applied and the limb fixed in an immovable apparatus in an extended position. At the end of a week the bandage is removed, a few passive motions made, and a starch bandage applied. One week later the patient may go about on crutches. From this time on a gradually increasing amount of passive and active motion is allowed, and at the end of six or eight weeks a complete cure may be expected. This treatment appears tedious, but the relapses are fewer than those which follow the ordinary methods.

Sanmetto in Gonorrhea with Epididymitis; Also in Specific Vaginitis with Salpingitis, Etc.

I take pleasure in testifying to the admirable therapeutic effects of Sanmetto. I used it in a case of gonorrhea with epididymitis, and the result was, if I may say, astonishing. I also used it in a case of spedific vaginitis, followed by the usual sequela, salpingigis, etc, and the symptoms were very much ameliorated by its use.

J. W. Worden, M. D.
Columbia City, Ind.

6

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Cystitis the Sequelæ of Gonorrhœa.

It is a well known fact that the use of astringent and antiseptic injections in the treatment of Gonorrhœa not infrequently give rise to various complications, such as Cystitis, which not only prolong the course of the disease, but render it more severe and distressing. The problem of how to utilize the undoubted beneficial effect of these injections without subjecting patients to the accompanying risks can now be regarded as finally solved. Micajah's Medicated Wafers are of uniform composition, definite strength, and contain those astringent and antiseptic principles which clinical experience has shown to be most serviceable in the treatment of affections of the mucous membranes. By dissolving one wafer in the desired quantity of water, a solution of definite strength is obtained, adapted to any stage of the disease, or the sensitiveness of the urethra. This method of treatment with the wafers will be found of value, both on the score of simplicity, efficiency, and convenience of application. Write Micajah & Co., Warren, Pa., for samples and literature.

Opinions of Schering's Formalin-Disinfection Method.

1. Prof. C. Flugge, of Breslau, Geheimer Medizinalrath and member of the Imperial Health Department, writes:

"I regard Formalin disinfection as very valuable in various infectious diseases. As can be seen from the accompanying abstract of a communication from Dr. E. Poleck, I believe that your apparatus, after comparison with those of Trillat and of Rosenberg, is the most practically useful one. It is my intention to employ it in the near future upon a larger scale, more especially since, by order of the "Cultus-minister," a School of Disinfection is to be established here."

2. Dr. Alexander, Regierungs and Medizinalrath, of Breslau, has written to inform us that the value of our Formalin Disinfection method is well recognized in the Breslau Hygienic Institute.

3. Dr. E. Poleck, of Breslau, Assistant in the Hygienic Institute, at the conclusion of a paper read before the Section on Hygiene of the "Schlesische Gesellschaft fur Vaterlandtsche Cultur", July 28th, 1897, says as follows: (Allgemeine Medizinische Central Zeitung No. 66, 1897):

"Aronsons results have been tested by Dr. Laschtschenkow in the Hygienic Institute here and have been fully confirmed."

The Schering apparatus is cheap and handy, requires no attention whilst in use, and the results are good and reliable. It is therefore positively to be preferred to that of Trillat.

4. Dr. Markl, K. K. Bzirksarzt, in the Ministry of the Interior, Vienna, writes:

"All the experiments made with Schering's Formalin lamp, which you have sent us, have been successful."

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In my practice the administration of Sanmetto has given excellent results. I have found ii unequalled in cases of cystitis and prostatitis, and all cases of irritability and inflammation of the genito-urinary tract. In many cases of gonorrhea I have used it with excellent satisfaction. I am pleased to recommend Sanmetto to the profession as a preparation which has proven invaluable to me in treating the above named conditions.

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Responsibility for Surgical Operations.

Recently in Paris a remarkable case, involving questions of practical surgery, has just come before the law courts, but this time there is no death to be deplored. A bicyclist had been run over in the street by a vehicle. When carried to the hospital he was found to have sustained a fracture of the arm which was put up by the surgeon in charge, M. Theophile Anger. In the course of the evening the patient complained of great abdominal pain, suffered from vomiting and syncope, and presented alarming peritoneal symptoms. A surgeon having been sent for, M. Hartman saw the case, diagnosed internal hemorrhage, and performed laparotomy. He removed from the abdomen a considerable quantity of clot and tied two mesenteric vessels that were bleeding freely. The patient made a good recovery, but as he had remained a long time in the hospital the person who had caused the accident, in order to obtain a reduction in the amount of compensation payable, argued that the laparotomy was unnecessary and that this was the sole cause of the patient's remaining so long in the hospital. M. Anger has just given evidence in favor of this strange claim before the tribunal, and said that the young surgeons of today are only too ready to open the abdomen. The medical world is not in favor of this evidence.

On the Absorption of Fat from Enemata.

Dr. Deucher (Treatment) gives an account of experiments and observations made in Prof. Sahli's clinic in Bern, to determine how far it is possible for fats to be absorbed from the rectum. It barely needs pointing out that the matter is one of some importance. In many of the cases where rectal feeding is necessary loss of heat is a marked feature, and the value of fat absorption for lessening this is great. The general line of observation was to feed by mouth with foods containing little fat; to carefully observe the quantity and constituents of fæces passed. Then while keeping the individuals on precisely the same diet by mouth, to give fixed amounts of fatty substances in enemata. The quantities of fat present in the stools after such enemata would give the precise measure of the quantity of fat absorbed.

The conclusions come to by Dr. Deucher are as follows:

1. The amount of fat that can be absorbed from enemata is very small, considerably less than one ounce a day.

2. The fat must always be given in the form of an emulsion.

3. The temperature of the enema should be 100.4 deg. 104 deg.

4. The rectum should be well emptied before giving the enema.

5. The amount of fat in the enema should be small, never more than one ounce.

6. The contents of the enema should remain in the intestine for a long time, as long as 24 hours.

7. A solution of common salt, 6 per cent. strength, appears to help in the absorption.

The tablespoonful of cream so commonly added to enemata nowadays practically fulfils many of the conditions laid down by Dr Deucher.

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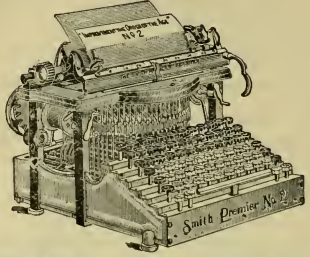

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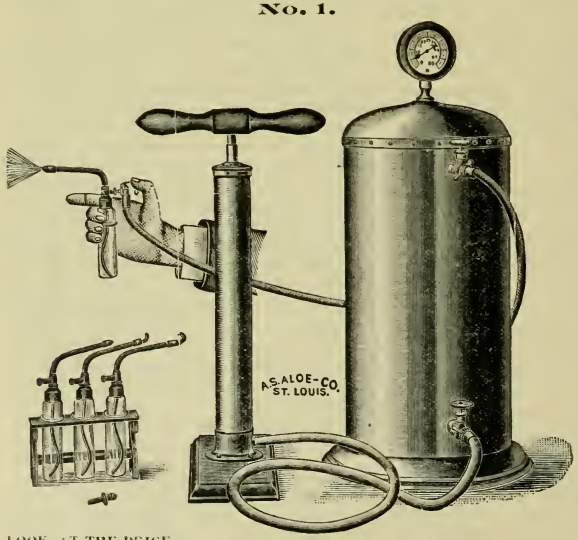

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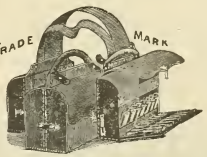

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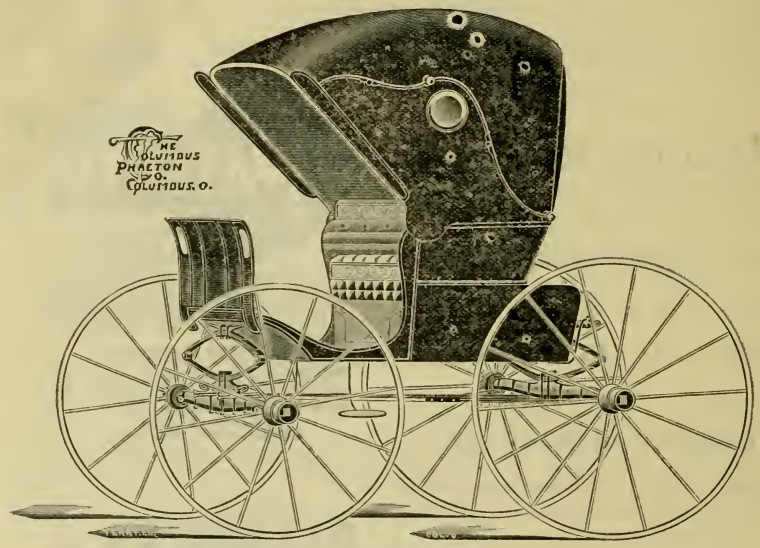

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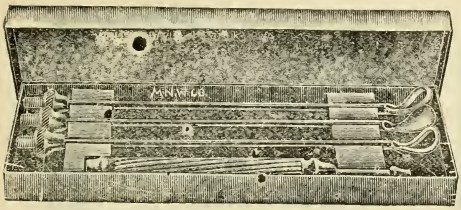

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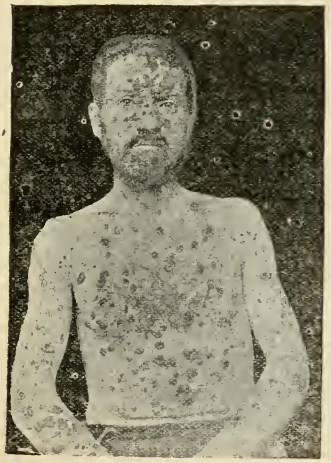

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